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(71) Applicants and
(72) Inventors: **VOTICKY, Michael** [CA/US]; 3513 Needles Drive, Austin, TX 78746 (US). **CONNER, Joe** [CA/US]; 3350 Northwest 53rd Circle, Boca Raton, FL 33496 (US).

(74) Agent: **KNIGHT, Richard, W.**; Akin, Gump, Strauss, Hauer & Feld, L.L.P., Suite 1900, 816 Congress Avenue, Austin, TX 78701 (US).

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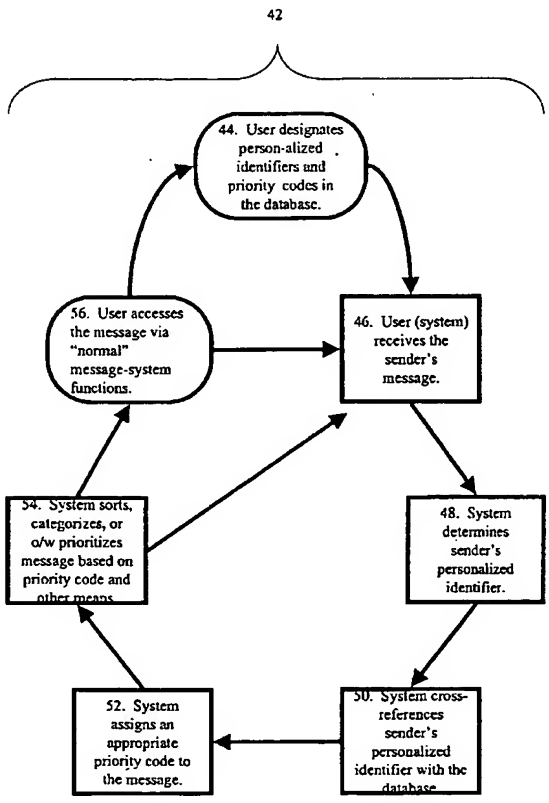
(54) **Title:** COMMUNICATIONS PRIORITIZER



(57) **Abstract:** A method of prioritizing a received information message in which the circumstantial origin of the message is indicated by a personalized identifier accompanying or derived from the message in regard to e-mail or other communications systems. The method includes the elements of receiving the message (46), determining the personalized identifier (48), looking-up and cross-referencing the personalized identifier (48) to a database of known personalized identifier and priority codes (50), assigning a priority code to the message (52) per the result of the element of looking-up and cross-referencing, and prioritizing (including categorizing, sorting, redirecting, erasing, or otherwise acting upon) (54) the received message according to the priority code.

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COMMUNICATIONS PRIORITIZER

INVENTORS
Michael Voticky
Joe Connor

SPECIFICATION

Field of the Invention

The present invention relates to information technologies and communications systems. In one aspect, the present invention relates to systems and methods for prioritizing communications, including but not limited to the prioritization of e-mail, voicemail, and facsimile messages, based on pre-selected parameters.

Background of the Invention

Communication and information technology systems and processes are attracting significant attention and innovation. The many new developments and venues for communication and information transfer, particularly in regard to electronic communications message systems, are fast becoming overwhelming due to the rapidly increasing number of exchanges that are occurring between communicators. Three of the most commonly used electronic communications message systems include electronic mail ("e-mail"), telecommunication voice messages ("voicemail"), and facsimile transmissions ("facsimiles"), and all three have become increasingly complex over time and are undoubtedly going to become even more complex and voluminous in the future. Consequently, e-mail, voicemail, and facsimiles, which were once expected to increase individual productivity, have begun to erode productivity because the effort required to manage the increasing volume of communications has become too challenging and time-consuming.

For example, in regard to e-mail, "spam" messages and other widely transmitted and broadcasted but unimportant and undesired informational communications are becoming more and more problematic because they increase the effort required by a typical e-mail recipient to personally prioritize the numerous messages of varying importance in order to separate the "wheat" of good messages from the "chaff" of undesired or unimportant messages. In

conventional systems, prioritizing, sorting, segregating, or otherwise acting upon or in response to (hereinafter referred to simply as "prioritizing") received e-mail messages requires the recipient to determine priority "on the fly" for each e-mail message, which in turn requires that each and every message be viewed or read to some extent—a highly inefficient process. A similar analysis also applies to voicemail messages and, to a lesser extent, facsimile messages which likewise accumulate and which must be separately prioritized through the user's active involvement.

While selected e-mail systems use "filters" to help alleviate the aforementioned problem, most if not all are very limited, inefficient, and largely ineffective. For example, e-mail filters maintained at the server computer act to prevent certain undesired e-mail messages from ever reaching the intended recipient. These filters are typically comprised of special computer instructions (software) that blindly identifies specific words and/or characteristics of an incoming message and systematically discards those specific messages so that they are never downloaded by nor are even accessible to the end-user recipient. These systems are generally inflexible, cannot be easily customized, and generally are limited to either accepting, deleting, or redirecting an incoming message. As for voicemail, facsimile, and other communications applications, even these simple, ineffective filters do not generally exist.

Given the increasing quantity of electronic communications, these conventional filtering mechanisms, and particularly those residing and maintained apart from the end-user, are problematic and ineffective at best and thus are not widely used. Consequently, most recipients of these electronic messages have little choice but to actively review each and every message personally and prioritize or, for unwanted messages, discard altogether each message individually. Existing filtering systems do not adequately address these problems because they operate largely without regard to the preferences or appropriateness of such filtering in regard to specific recipients. For example, the intended recipient may in fact desire to receive certain messages that are in fact being discarded or otherwise prioritized in an inappropriate manner regarding that particular recipient user, or the intended recipient may receive messages that the recipient does not want to receive but which are not precluded by the filtering system. Existing filtering systems afford message recipient with little or no ability to change or vary priorities and associated discrimination characteristics, much less do so "on the fly" to provide specific, unique, and personalized prioritization.

Summary of the Invention

The solution to communications overload provided in accordance with the present invention is to put more control into the hands of end-users and provide end-users with powerful tools to prioritize incoming communications. The present invention enables message recipients or a designee, such as the electronic communications service provider, to automatically prioritize incoming messages based on broad pre-selected parameters. This new and innovative technology has the potential to revolutionize communication services, including those services involving voicemail, e-mail, and facsimile. The present invention may also be readily extended to other forms of message communication, including but not limited to "hybrid messaging" such as facsimiles converted into e-mail messages which may or may not include an attached graphics file, voicemail messages converted into e-mail messages which may or may not include an attached digital sound file, e-mail messages converted into voicemail messages, and e-mail messages converted into facsimiles, as well as web-based e-mail messaging applications, analog and digital pager applications, analog and digital mobile (cellular) phone applications, interactive cable programming applications, laser transmissions, satellite communications, and other individualized communication services. For all of these reasons, and in light of the plethora of applications to modern and futuristic communications technologies, the advantages presented by the present invention are significant to both the technology and the art.

An embodiment of the present invention is a method for an electronic communication prioritization system to prioritize a received information message, including but not limited to e-mail messages, voicemail messages, facsimile messages, and any combinations or permutations thereof, by determining the originating source (the "sender") of the message that is by some means identified by a personalized identifier accompanying or embodied in the message. The method includes the elements of determining a personalized identifier for a received message, comparing the personalized identifier from the message against an informational database, assigning a priority code to the message based on the priority corresponding to the personalized identifier as indicated in the database, and prioritizing the message based on the assigned priority code.

Another embodiment of the invention is a system for prioritizing a received information message where the originating source (the "sender") of the message is indicated by a personalized identifier corresponding to the message. The system includes a database maintaining known

personalized identifiers and the desired priority codes corresponding to these known identifiers, as well as one or more priority codes corresponding to unknown personalized identifiers and/or non-personalized messages. The system further includes a system for determining a personalized identifier for that message, a system for matching the personalized identifier to a database to derive the appropriate priority code, a system for assigning the priority code to the message based on the priority corresponding to the personalized identifier, and a system for prioritizing the message based on the priority code.

Another embodiment of the invention is a computer-readable medium of data and/or instructions. The computer-readable medium of data and/or instructions includes a message, a personalized identifier associated with the message or a means by which the personalized identifier can be determined from the message, computer instructions for receiving the message and the personalized identifier, a database containing known identifiers and desired priority codes corresponding to the known identifiers, computer instructions for cross-referencing the database with the personalized identifier to determine a desired priority code, computer instructions to assign the priority code to the message based on the priority corresponding to the personalized identifier, and computer instructions to prioritize the message based on the priority code.

In all of the possible embodiments of the present invention, including the foregoing embodiments, the term "prioritization" expressly includes all possible subsequent actions that could be taken in response to the receipt of the message, such as prioritizing, sorting, segregating, forwarding, deleting, modifying, replying, or otherwise acting upon or in response to the personalized identifiers and the resulting priority code. For example, an embodiment of the present invention could, as part of the prioritization of the message, automatically reply with a specific response message to the specific known sender of the received message before, during, or after said receipt. In the context of e-mail, and by way of example only, this response-prioritization might be an auto-response message to a specific known sender to let the sender know that the user is out of town. In the context of voicemail, and by way of example only, the prioritization response might be a customized recorded greeting for the known sender that is played before the sender leaves the voicemail message. A myriad of other actions and reactions are also possible and are expressly included as elements of "prioritization" as that term is used herein.

Likewise, in all of the possible embodiments of the present invention, including the foregoing embodiments, numerous and varied potential personalized identifiers could be used. For example, possible personalized identifiers for e-mail messages include without limitation the sender's "return address" (e.g., sender@domain.com); a personalized identification in the "subject" line or other location within the message that is known and held in confidence by both the sender and the recipient such as a personal identification number (PIN) or, as later defined herein, a PAC; a "trusted" third-party verification of identity in some form or manner such as used in certain electronic commercial transactions; an identification file in some format that is included, embodied, or otherwise attached to (collectively, "associated with") the message; the personalized elements inherent to the format of the incoming message itself (its "inherent characteristics"); the machine number for the sender server; the path origin information specifying the geographic or physical path over which the message was transmitted; or identification by any other authentication means known by those with skill in the art. Similarly for voicemail messages and facsimile messages, examples of possible personalized identifiers include without limitation the sender's "Caller-ID" (the identifying phone number of the originating source), messaging or billing data associated with a particular call, or a personalized identification code known held in confidence by both the sender and the recipient such as a PIN or PAC and keyed-in or spoken by the sender. Furthermore, personalized identifiers may also be unilaterally derived from the inherently personalized elements of certain kinds of messages, including but not limited to using voice recognition technology (specifically, a "voiceprint") to identify the sender of voicemail messages—which, in this case, does not require the knowledge nor special participation by the sender in the prioritization process—or the sending station identification that is part of a facsimile message transmission. In a similar manner, the present invention also included embodiments based on other personalized means of identification and verification, commonly known as "biometric signature technologies," that, with appropriate technological means, could also be incorporated as personalized identifiers, such means including without limitation the following: voice recognition; voiceprints; optical scans and/or iris-prints; DNA scans including without limitation those using blood, hair, skin cells, and so forth; face recognition; typing patterns at, for example, a keyboard or numeric entry pad; hand geometry; palm-print(s); fingerprint(s) (including thumbprint(s)); and all elements of signature geometry, which comprise not just the physical appearance of the signature, but also elements related to pen pressure, signature speed, acceleration and deceleration patterns, looping, edging, and so forth.

The "personalized" element of any of the aforementioned personalized identifiers is not limited or confined to individual persons, but can be personalized as to broad categories of individuals, or personalized as to specific instances for a specific individual, thereby spanning the entire range of prioritization. In regard to the former instance of broad categories ("categories"), and by way of an unlimited example only, e-mail messages may be identified solely based on the domain of the sender or group of senders, for example, all e-mails received from persons using a HotMail address (users@hotmail.com). In regard to the latter instance of very narrow categories, and again by way of an unlimited example only, a specific individual (the sender) may be invited to send a voicemail message—which, for example, may be in response to an inquiry sent by the user to that party—in which the sender of the message is directed to use a one-time numeric identification number, such as one entered by a touch-tone phone, to be inserted at the beginning of the message and which, once used, is automatically precluded from being re-used by the sender again thereafter. As denoted by these examples, the present invention is intended to include and claim all possible ranges of specificity in the degree of uniqueness from the broadest application or "categorization" to the narrowest "instance" without any limitations whatsoever.

Finally, nothing in this description of the invention is intended to convey any limitation on the applicability of the present invention in regard to any division or separation between traditionally separate messaging means. In this regard, multi-message-systems such as systems that consolidate messages from varying message sources—e.g., consolidating e-mail, voicemail, facsimile, and other messages—into a single system of a single message type or multiple message types, can implement the present invention without regard to the originating message type or, alternately, may use the message type as an additional dimensional parameter in the prioritization scheme implemented by the present invention.

Brief Description of the Drawings

FIG. 1 illustrates a communication system for a message across a communications medium, wherein said communications system includes a sender, the communications medium, and a user who is the recipient of the message.

FIG. 2A illustrates a structural representation of the prioritization system in accordance with one embodiment of the present invention.

FIG. 2B illustrates a flowchart representation of the operation of the automated message prioritization system in accordance with one embodiment of the present invention.

FIG. 3A illustrates an exemplary screen image, as presented on the message recipient's computer system, of prioritized messages residing in a single virtual mailbox in sorted order.

FIG. 3B illustrates three additional incoming messages received at the times indicated and with the associated priorities determined by the prioritization system.

FIG. 3C illustrates the sorting and placement of the three messages into the virtual mailbox of FIG. 3A in accordance with the priorities of the new messages relative to the priorities of the existing messages.

FIG. 4A illustrates an exemplary screen image as presented on the message recipient's (the user's 8) computer system of prioritized messages categorized in a plurality of virtual mailboxes and therein residing in sorted order.

FIG. 4B illustrates three additional incoming messages received at the times indicated and with the associated priorities determined by the prioritization system.

FIG. 4C illustrates the categorization and sorting of the three messages into the virtual mailbox of FIG. 4A in accordance with the categorization priorities of the new messages relative to the categories and priorities of the existing messages.

FIG. 4X illustrates the exemplary screen image as presented on the message recipient's (the user's 8) computer system of prioritized messages categorized in a plurality of virtual mailboxes and therein residing in sorted order of FIG. 4A with an alternative arrangement of the four categorical virtual mailboxes comprising the plurality of categorized virtual mailboxes.

FIG. 4Y illustrates the three additional incoming messages received at the times indicated and with the associated priorities determined by the prioritization system.

FIG. 4Z illustrates the categorization and sorting of the three messages into the virtual mailbox of FIG. 4X in accordance with the categorization priorities of the new messages relative to the categories and priorities of the existing messages.

FIG. 5A illustrates the set of personalized identifiers available from using a single character priority alpha-numeric code (PAC).

FIG. 5B illustrates the set of personalized identifiers available from using a two-character priority alpha-numeric code (PAC)

Detailed Description

FIG. 1 illustrates a communication system 2 for a message across a communications medium 6 wherein said communications system 2 includes a sender 4, a communications medium 6, and a user 8 who is the recipient of the message. Without limitation, the communications medium 6 may be an electronic communications network, such as a telecommunications network (e.g., the Internet), a local area network (LAN), a wide area network (WAN), a wireless network (e.g., cellular, pager, etc.), a switchboard, or any other type of communications medium, including the associated interconnection, switching, routing, and other communications elements of a conventional communications network structure. The sender 4 and the user 8 are both connected to the communications medium 6, or they may be connected directly together, or both. The communications system 2 operates in a conventional manner. Communications between the sender 4 and the user 8 (the recipient) travel across the communication medium 6.

The prioritization system of the present invention may be located with the user 8 and might not be part of the communications medium 6. The prioritization system comprises software or hardware for prioritizing messages received by the user 8. In one embodiment, a central processing unit 10 (CPU) processes incoming messages in accordance with information maintained in the priority instructions 16 and the database 14, both of which are maintained in memory 10 that are part of the user 8.

FIG. 2A illustrates a structural representation of the prioritization system in accordance with one embodiment of the present invention. In this embodiment, a message, sent by a sender 4, may be first received or, alternately, retrieved from the communications medium 6 by the user 8 via a receiver 24, comprising hardware and/or software, and the message may be temporarily maintained in a processing buffer 26. The CPU 10 accesses the priority instructions 16 and,

based on the information therein, parses the message to derive the sender's 4 personalized identifier from the message received. Once the sender's 4 personalized identifier is derived—or, if no personalized identifier can be derived, then once a standard identifier is alternately assigned and thereafter treated as a personalized identifier—the CPU 10 then accesses the database 14 to determine the appropriate priority code based on the derived personalized identifier. Once the priority code is determined, this code may then be associated with the message by the CPU 10 and the message may then be removed from the processing buffer 26 and prioritized in the appropriate virtual message box 28 position in accordance with its assigned priority.

FIG. 2B represents a flowchart representation of the operation of the automated message prioritization system in accordance with an embodiment of the present invention. In the method 42, a user 8 develops the priority database 14 in FIG. 1 by designating personalized identifiers and associated priority codes for the software and hardware of the present invention (instance 44). The database 14 developed in instance 44 may be any conventional database that allows for custom prioritization among database elements or interaction between the database and additional customized software that performs such prioritization of elements of the database 14. The data entered into the database 14 itself includes personalized identifiers for known or expected senders of messages that the user 8 expects to receive from potential senders via the communications medium 6. For example, in the specific case of e-mail messages to be received by a user 8, the data entered in the database 14 may be e-mail address identifiers in the typical e-mail address format of "username@domain.com" or a category of senders using a common domain in any manifestation incorporating the format of "@domain.com", "@domain.org", etc. Of course, typical e-mail addresses and domains have some variation, and the data entered in the database 14 might correspond with each of those variations, or combinations or permutations thereof, according to those sources from which e-mail messages are expected to be received by the user 8.

The personalized identifier data entered in the database 14 need not include a personalized identifier for every sender 4 from which a message may be received by the user 8, but can include a personalized identifier for a group or category of individual senders 4. For example, the method 42 can provide for prioritization based on a common characteristic of the expected incoming messages. For instance, using method 42 as an example of an e-mail system, the common characteristic could be common e-mail address information such as common domain name information or other similar characteristics comprising a category. Likewise, for unexpected messages from unknown or unexpected senders, prioritization can be provided by the

method 42 in accordance with the desires of the user 8—for instance, a standard priority code that can act as a surrogate personalized priority code. Therefore, even though the database may not include data corresponding to an unexpected e-mail message, that message may still be prioritized according to the dictates of the user 8.

In instance 46, a message may be received by the user 8 of the present invention. The message may be received in the conventional manner for that type of message from the communications medium 6. In instance 48, the system of the present invention, using the CPU 10 of FIG. 1, determines, in accordance with the priority instructions 16 of FIG. 1, the personalized identifier corresponding to the received message or, if there is no personalized identifier, utilizes a standard personalized identifier reserved for messages from unknown senders (i.e., as a surrogate personalized identifier). For e-mail messages, this instance 48 may involve processing the sender's 4 e-mail address or, alternately, processing a personal identification number of some sort embedded in the message. In a voicemail context, and without limitation, this instance may involve processing a personal identification number keyed-in before, during, or after the message or, alternately and with appropriate technology, conducting a voiceprint analysis, using voice recognition technology, or merely analyzing the Caller-ID information of the sender 4 leaving the message, among many other possibilities.

In instance 50, a lookup operation may be performed by the system of the present invention utilizing software or hardware of said system to cross-reference the sender's 4 personalized identifier determined in instance 48 with the database 14 from FIG. 1. In regard to e-mail messages, the e-mail address of the received e-mail message from the instance 46 might be compared to data indicative of e-mail addresses which are maintained in the database 14. If the e-mail address is found in the database 14, then the priority code found in the database 14 corresponding to that particular e-mail address may be the priority to be given to the received e-mail message. Similarly, if the e-mail address is not found in the addresses which are maintained in the database 14 of the user 8, then the priority code found in the database 14 corresponding to an unlisted e-mail address (i.e., the surrogate personalized priority code) may be the priority to be given to the received e-mail message. Therefore, based on the hardware and software prioritization mechanisms maintained at the user 8, the received e-mail message may then be prioritized according to the code corresponding to the e-mail address, or lack thereof, in accordance with the information entered by the user 8 into the database 14 in instance 44. The assignment of the priority code to a received message occurs in instance 52.

In instance 54, the message received by the user 8 may be deposited in an attendant virtual "messagebox" or "mailbox" 28 which, as these terms are used throughout, apply to collection and maintenance of any form of messages for use by the user 8, including but not limited to e-mail, voicemail, facsimile, and combinations and variations thereof, as well as conversions from one form to another, and these terms are fully equivalent as used herein and are therefor used interchangeably without limitation. In the case of an e-mail system, this virtual mailbox 28 may be maintained at the user 8. The virtual mailbox 28 for any kind of message may be software and/or hardware of the user's 8 system that provides standard, conventional mailbox functions along with additional functionality necessary to prioritize the received message according to the assigned code derived from instance 52.

In instance 56, the software or hardware on the system provides for normal, conventional functions which, in an e-mail context, include but are not limited to "reply," "forward," "copy," "delete," and other myriad functions.

At any point in the method 42, the user 8 may receive additional e-mail messages in instance 46, and a user 8 of the system may also change the priority instructions 12 and/or the data in the database 14 in the instance 44. These changes may include but are not limited to such changes necessary to (a) add "expected" or "known" sender e-mail addresses to the data, (b) change corresponding priority codes, or (c) vary the prioritization then implemented on the prioritization system via the software and/or hardware thereof.

Several schemes of prioritizing are possible via the virtual mailbox, as those skilled in the art will understand and appreciate. For example, the received messages may be merely prioritized in a most-important-to-least-important descending order according to the particular assigned priority code, and perhaps further sorted within each priority code designation in accordance with the order each message is received with earlier messages receiving a higher "sorting priority." In this manner, all incoming messages are grouped together in a common mailbox, but the order of the messages might be first determined by the priority code and then further sorted according to the date and time each message is received. By way of example only, FIG. 3A illustrates an exemplary screen image, as presented on the message recipient's computer system, of a prioritized messages residing in a single virtual mailbox in sorted order; FIG. 3B illustrates three additional incoming messages received at the times indicated and with the

associated priorities determined by the prioritization system; and FIG. 3C illustrates the sorting and placement of the three messages into the virtual mailbox of FIG. 3A in accordance with the priorities of the new messages relative to the priorities of the existing messages. In one embodiment, the prioritization scheme of the present system may be based on four levels of priority as follows:

Priority "A" – High Priority

Priority "B" – Intermediate Priority

Priority "C" – Low Priority

Priority "X" – No Priority (Junk Mail, unknown-origin messages, etc.)

For purposes of this example only, a message from a known source that may be considered by the user 8 to be important may be granted the highest priority "A", whereas a message from a known source that may be considered by the user 8 to be of lesser importance may be granted the intermediate priority of "B". Similarly, a message from a known source that may be considered unimportant to the user 8 may be granted a low priority of "C", whereas a message from an unknown source or from an undesirable known source, such as a known "junk-mailer" or "spam-mailer", might be given the lowest priority of "X".

Referring to FIGS 3A, 3B, and 3C collectively, the structure of the virtual mailbox display 310 may be based on columns corresponding to the determined priority 312, the originating sender 314 corresponding to and identifying the sender, the subject line of the message 316, and the date 318 and time 320 the message was received or sent. The old messages 322 already resident in the virtual mailbox are grouped and sorted in accordance with their priority codes 324, 326, 328, and 330—which also correspond to the natural categorization groups for each of the four categories—and are further sorted within each of these groupings based on date 318 and time 320 each message was received or sent. Based on the temporal starting point illustrated at FIG. 3A, the first new message 352 of FIG. 3B may be received at 10:01 P.M. on September 10, 1998, may be determined to have a priority of "B" because it may be from a known sender of intermediate priority, and may therefore be placed in the virtual mailbox at position 372 of FIG. 3C (i.e., the bottom of natural group "B") based on its relative

priority 312 and the date 318 and time 320 the message 352 is received compared to the previously received messages. The second new message 354 of FIG. 3B may be received at 11:42 P.M. on September 10, 1998, may be determined to have a priority of "X" because it may be from an unknown sender or a known spam-mailer, and may therefore be placed in the virtual mailbox at position 374 of FIG. 3C, i.e., the bottom of natural group "X" which may be also the bottom of the mailbox, based on its relative priority 312 and the date 318 and time 320 the message 354 is received compared to the previously received messages. The third new message 356 of FIG. 3B may be received at 2:41 A.M. on September 11, 1998, may be determined to have a priority of "A" because it may be from a known sender 4 of high priority, and may therefore be placed in the virtual mailbox at position 376 of FIG. 3C, i.e., the bottom of natural group "A", based on its relative priority 312 and the date 318 and time 320 the message 356 is received compared to the previously received messages.

Alternatively, the received messages may be categorized in more important or less important virtual mailboxes that may be established by the user's 8 prioritization system, which may be the user 8 for e-mail systems of method 42. In this regard, the software and/or the hardware of the user's 8 system allows the user 8 of that system or the user's 8 designee to determine the prioritization and thereby dictate to which particular virtual mailbox incoming messages received by the system should be placed or located. Multiple groups and multiple sorting methods may be combined to produce varied results. Prioritization need not be limited to one dimension as in the previous examples—e.g., most important to least important—but may be multi-dimensional—e.g., four distinct categories of messages such as, office, family, friends, and others—with additional prioritization within each category that may be unrelated to relative prioritization in the other categories. By way of example only, FIG. 4A illustrates an exemplary screen image as presented on the message recipient's (the user's 8) computer system of prioritized messages categorized in a plurality of virtual mailboxes and therein residing in sorted order; FIG. 4B illustrates three additional incoming messages received at the times indicated and with the associated priorities determined by the prioritization system; and FIG. 4C illustrates the categorization and sorting of the three messages into the virtual mailbox of FIG. 4A in accordance with the categorization priorities of the new messages relative to the categories and priorities of the existing messages. Similar to the embodiment of the invention described in FIGS. 3A, 3B, and 3C, the prioritization scheme of the present system may be based on four levels of priority categorization as follows:

Priority "J" -- Work Priority

Priority "K" -- Family and Friends (F&F) Priority

Priority "L" -- Non-Work and Non-F&F Priority

Priority "Z" -- No Priority (Junk Mail, unknown-origin messages, etc.)

For purposes of this example only, a message associated with the user's 8 "work" may be granted the categorization priority of "J" while a message from "family and friends" may be granted the corresponding categorization priority of "K". Similarly, a message from a known source that does not qualify for categorization in "J" or "K" may be granted a categorization priority of "L" while a message from an unknown source or from an undesirable known source, such as a known "junk-mailer" or "spam-mailer", might be categorically prioritized into "Z".

Referring to FIGS 4A, 4B, and 4C collectively, the structure of each of the four categorical virtual mailboxes 404, 406, 408, and 410 comprising the plurality of categorized virtual mailboxes 402 may be based on columns corresponding to the originating sender 414 corresponding to and identifying the sender, the subject line of the message 416, and the date 418 and time 420 the message was received or sent. The old messages 422 already resident in the virtual mailbox are grouped and sorted in accordance with the four priority codes 424, 426, 428, and 430 corresponding to the four categorical virtual mailboxes 404, 406, 408, and 410, with the messages therein further sorted within each of these categorical virtual mailboxes 404, 406, 408, and 410 based on date 418 and time 420 each message was received. Based on the temporal starting point of FIG. 4A, the first new message 452 of FIG. 4B may be received at 10:01 P.M. on September 10, 1998, may be determined to have a priority of "K" because it may be from a family member or friend (F&F), and may therefore be placed in the corresponding categorized virtual mailbox 406 at position 472 of FIG. 4C—i.e., the bottom of categorized virtual mailbox "K" 406—based on its relative categorization priority 412 and the date 418 and time 420 the message 452 may be received compared to the same elements of previously received and categorized messages. The second new message 454 of FIG. 4B may be received at 11:42 P.M. on September 10, 1998, may be determined to have a priority of "M" because it may be from an unknown user or a known spam-mailer, and may therefore be placed in the categorized virtual mailbox 410 at position 474 of FIG. 4C—i.e., the bottom of categorized virtual mailbox 410

which may be also the bottom of the mailbox "M" 410—based on its relative categorization priority 412 and the date 418 and time 420 the message 454 is received compared to the previously received and categorized messages. The third new message 456 of FIG. 4B may be received at 2:41 A.M. on September 11, 1998, may be determined to have a priority of "J" because it may be from the user's 8 "work" and therefore may be placed in the virtual mailbox at position 476 of FIG. 4C—i.e., the bottom of categorized virtual mailbox "J"—based on its relative categorization priority 412 and the date 418 and time 420 the message 456 is received compared to the previously received and categorized messages. Unlike the natural categorization groups of the virtual mailboxes in FIGS. 3A, 3B, and 3C, the virtual mailboxes 404, 406, 408, and 410 of this embodiment may have overlapping priority among the categorized groups such that this second new message 454 may or may not be more important than the first new message 452 or any other message in the first virtual mailbox 404.

Referring to FIGS. 4X, 4Y, and 4Z collectively, the embodiment of FIGS. 4A, 4B, and 4C is here shown with an alternative arrangement of the four categorical virtual mailboxes 404, 406, 408, and 410 comprising the plurality of categorized virtual mailboxes 402. The description of FIGS. 4X, 4Y, and 4Z is otherwise identical to the description of FIGS. 4A, 4B, and 4C.

Numerous alternatives and variations are possible in the embodiments described herein. For example, in an e-mail context, the user 8, by using the invention's prioritization schemes, may distinguish certain received communications for designated treatment and/or action. One possibility may be that the user 8 can act on particular communications by forwarding or sending a copy of the communications to another designated destination, such as another e-mail address, a voice-synthesized version to a telephone number, a "visual" version to a facsimile machine, or an actual hard copy version by mail to a post office address or equivalent. Alternatively, the user 8 could perform operations on or with the communication, for example, if the communication is data information for use in calculative processes. The user 8, furthermore, can have variable and multiple numbers of boxes or categories in which communications are maintained, and separate mailboxes or categories may be treated in a variety of different manners by the user 8. And another possibility may be that the sort, categorization, or prioritization functions may be performed based on alternative personalized identifiers other than an IP address, such as Internet domain name or other ascertainable characteristic of a received messages. This e-mail example is readily extendible to the other forms of messages as understood and appreciated by those skilled in the art.

As will be appreciated, an embodiment of the invention may utilize, in order to achieve the desired prioritization or categorization for each situation, a "priority alphanumeric code" (PAC) to achieve prioritization. As used herein, a PAC may be an alphanumeric field which can be any size and can range from a single character to an infinite number of characters and, in many ways, may be similar to a PIN as earlier defined herein except that it need not be "personal" in nature, but can instead be situational or temporal in nature. The size of the PAC field may be determined by the extent of security and sorting desired in light of the relative ease of use. FIG. 5A illustrates the set of personalized identifiers available from using a single character priority alpha-numeric code (PAC). FIG. 5B illustrates the set of personalized identifiers available from using a two-character priority alpha-numeric code (PAC). A single character field PAC 502 may be limited to only 36 different possibilities 504—10 numeric and 26 alphabetic, and thus equivalent to a base-36 counting system—but this single-character PAC would be very easy for the user 8 to use and manage. However, by expanding the field to just two characters, the possible dual character field PACs 552 available increase exponentially to 36 raised to the 2nd power 554, thereby providing 1,296 possible combinations. Likewise, by expanding the field to four characters the possible PACs available increase to 36 raised to the 4th power—which is more than 1.6 million possible combinations (not shown)—and a six character field yields 36 raised to the 6^{th} power of possible combinations or just over 2 billion possible PACs (not shown). Thus the greater the size allowed for the PAC field, the greater security afforded because, for one reason, most of these PACs would not be used, and a hacker would have a more difficult time determining a valid PAC and the greater flexibility in variation of possible sort characteristics or categories, because of the number of priority levels available, albeit at the price of higher complexity in the PAC itself.

Priority sorting using a 5-character PAC, where each PAC also corresponds to its relative level of priority, provides a very detailed level of sorting. In one example, the following PAC priority sorting scheme provides superior prioritization and categorization of messages:

I. PAC # (using a base-36 numbering system)

00000 to A10ZZ - (dead space)

A1100 to A1194 - mail from executives

A1195 to A11ZZ - (dead space)

A1200 to A1294 - mail from customer services

A1295 to A12ZZ - (dead space)
A1300 to A1394 - mail from warehouse, etc: . . . .
A1395 to ZZZZZ - (dead space)

In effect, by assigning a PAC between A1100 to A1194 (e.g., executives) to a received message, that message would have a higher priority than a message with a PAC of A1200 to A1294 (e.g., customer service) or A1300 to A1394, and thereby could be sorted to the top of the list. A PAC of A1111 would have a higher priority than a message with a PAC of A1112 and would thereby be prioritized (e.g., sorted) higher up in the list. "Dead space" numbers that do not correspond to one of these three categories might be classified as "hacker" and deleted or as "unidentified" and treated accordingly. The user 8 might automatically assign a corresponding PAC or range of PACs to each of several virtual mailboxes, thereby categorizing each subset of PACs separately and establishing a limited two-dimensional sorting and categorization system. The user 8 might also designate a range of one-time PACs for individual, specific-instance uses. For example, the user 8 might use the series of numbers between BB001 and BBZZZ as one-time PACs (temp-PACs) that, once given out and used (i.e., replied to), would no longer be valid. If the sender 4 tried to use the same one-time PAC again, that message would automatically be rejected or assigned a lesser priority other than the one-time priority.

While PACs may have relative priorities as individualized as their unique numbers, as in the previous examples, these PACs might, in addition or instead, have categorized priorities. In the previous example, all of the "executive" PACs might have a priority of "A", all of the customer service PACs might have a priority of "B", and so forth. Thus, while the PACs may have individual PACs that would support absolute relative prioritization even among near PAC numbers, this is by no means necessary to the invention as categorized prioritization (a.k.a. group prioritization) may also be possible and may in fact be preferred.

In many regards, PACs can be viewed as an inverse form of the more commonly used personal identification number or PIN—such as those used for automatic teller machines (ATMs), debit cards, and for other purposes—the primary difference being that PINs are generally used to confirm authority to take, use, or receive something—such as cash at an ATM—whereas PACs would be employed to achieve priority and an audience for an accompanying message. In this regard, a PAC may therefore be a mechanism to employ "alpha-

numerics" in order to provide for millions of possible combinations that also concurrently allow for sequencing or other specially-designated treatment.

In accordance with a further embodiment of the present invention, the sender 4 of the received message need not necessarily become aware that their message is being prioritized since the priority can be determined at the recipient's computer and be based on origin of the sender 4 (e.g., e-mail address or Caller-ID number) which may then be matched to the recipient computer's database and directed to the proper mailbox. Likewise, there are several ways that a PAC can be assigned to an anticipated sender of messages to appropriately prioritize a message when received by the user 8 without that sender's conscious knowledge of the prioritization if messaging software used by both parties is specifically developed to incorporate this functionality. This additional functionality will be readily appreciated and understood by those skilled in the art.

By way of example only, and in the context of e-mail messaging using specially designed software, a user 8 may solicit a response from a would-be sender 4 by first sending that party an e-mail message (from the user 8 to the would-be sender 4) incorporating a PAC as a "hidden" element of the message, said PAC then becoming automatically incorporated in any response to said user's 8 message. To accomplish this end, the user's 8 message can contain a space or field to designate a PAC, in which intended recipient's—here, the would-be sender 4—specific "Reply PAC" can be inserted either manually or automatically by cross-referencing the user's 8 database 14 with the intended recipient's (sender's 4) e-mail address.

Although the foregoing description primarily refers to a user's 8 computer as performing the prioritization or categorization of incoming messages via the PAC scheme, it should be understood that any computer in a network can perform the described functions in a myriad of alternative methodologies readily apparent to those skilled in the art. Any means and method that could adopt the "PAC" methodology of scrutinizing or prioritizing in accordance with the foregoing descriptions or similar procedures are thereby included as part and parcel of the present invention. Likewise, to the extent that any of the functionality described herein can occur on the server computer, or be distributed across any number of computers, but still attain the same or similar result, those elements are also included in and anticipated by the present invention. Furthermore, as the foregoing analysis can also apply to other message types, this analysis is

likewise applicable to the present invention for these other types as readily appreciated by those skilled in the art.

It is to be understood that multiple variations, changes and modifications are possible in the aforementioned embodiments of the invention. Although illustrative embodiments of the invention have been shown and described, a wide variety of modification, change and substitution is contemplated in the foregoing disclosure and, in some instances, some features of the present invention may be employed without a corresponding use of the other features. Accordingly, it is appropriate that the foregoing description be construed broadly and understood as being given by way of illustration and example only, the spirit and scope of the invention being limited only by the appended claims.

CLAIMS

What is claimed is:

1. A method for an electronic communications message system to prioritize an information message comprising:
determining a personalized identifier corresponding to the message;
locating the personalized identifier in a database;
assigning from the database a priority code corresponding to the personalized identifier; and
prioritizing the message according to the priority code.

2. The method of claim 1, wherein the priority code is maintained in the database and corresponds to the personalized identifier in the database, and further comprising depositing the message in a virtual mailbox corresponding to the priority code.

3. The method of claim 2, wherein the database, the personalized identifiers, the priority codes, and the correlation between the personalized identifiers and the priority codes are initially defined by a user and subsequently changeable by said user.

4. The method of claim 1 wherein the prioritization includes an element of providing a personalized response to the sender.

5. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is a sender e-mail address corresponding to the e-mail message.

6. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is a PIN associated with the e-mail message.

7. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is a PAC associated with the e-mail message.

8. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is a third-party verification of identity for the sender of the e-mail message.

9. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is an inherent characteristic of the e-mail message.

10. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is a machine number for a sender server of the e-mail message.

11. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is path origin information associated with the e-mail message.

12. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is message data associated with the e-mail message.

13. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is billing data associated with the e-mail message.

14. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is a file attached to the e-mail message.

15. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is derived from a biometric signature technology associated with the e-mail message.

16. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is derived from the voiceprint of an audio element associated with the e-mail message.

17. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is derived from a signature analysis of a graphics element associated with the e-mail message.

18. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is derived from processing an optical scan element associated with the e-mail message.

19. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is derived from processing an iris print element associated with the e-mail message.

20. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is derived from processing a DNA scan element associated with the e-mail message.

21. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is derived using face recognition technology to process a photographic facial image element associated with the e-mail message.

22. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is derived from analysis of a keyboard typing pattern element associated with the e-mail message.

23. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is derived from an analysis of a numeric keypad typing pattern element associated with the e-mail message.

24. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is derived from an analysis of a hand geometry element associated with the e-mail message.

25. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is derived from analysis of a fingerprint element associated with the e-mail message.

26. The method of claim 1, wherein the information message is an e-mail message and the personalized identifier is derived from analysis of a thumbprint element associated with the e-mail message.

27. The method of claim 1, wherein the information message is an e-mail message and wherein the prioritization includes an element of providing a personalized response to the sender based on the personalized identifier and the priority code.

28. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is a Caller-ID number corresponding to the facsimile message.

29. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is a PIN associated with the facsimile message.

30. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is a PAC associated with the facsimile message.

31. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is a third party verification of identity of the sender of the facsimile message.

32. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is an inherent characteristic of the facsimile message.

33. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is a sending station identification corresponding to the facsimile message.

34. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is a biometric signature technology associated with the facsimile message.

35. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is derived from the voiceprint of an audio element associated with the facsimile message.

36. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is derived from a signature analysis of a graphics element associated with the facsimile message.

37. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is derived from processing an optical scan element associated with the facsimile message.

38. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is derived from processing an iris print element associated with the facsimile message.

39. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is derived from processing a DNA scan element associated with the facsimile message.

40. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is derived using face recognition technology to process a photographic facial image element associated with the facsimile message.

41. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is derived from an analysis of a hand geometry element associated with the facsimile message.

42. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is derived from analysis of a fingerprint element associated with the facsimile message.

43. The method of claim 1, wherein the information message is a facsimile message and the personalized identifier is derived from analysis of a thumbprint element associated with the facsimile message.

44. The method of claim 1, wherein the information message is a facsimile message and wherein the prioritization includes an element of providing a personalized greeting to the sender based on the personalized identifier and the priority code.

45. The method of claim 1, wherein the information message is a facsimile message and wherein the prioritization includes an element of providing a personalized response to the sender based on the personalized identifier and the priority code.

46. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is a Caller-ID number corresponding to the voicemail message.

47. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is a PIN associated with the voicemail message and keyed-in by the sender.

48. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is a PAC associated with the voicemail message and keyed-in by the sender.

49. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is a PIN associated with the voicemail message and spoken by the sender.

50. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is a PAC associated with the voicemail message and spoken by the sender.

51. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is a voice command corresponding to the voicemail message.

52. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is derived from a biometric signature technology associated with the voicemail message.

53. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is derived from the voiceprint of an audio element associated with the voicemail message.

54. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is derived from a signature analysis of a graphics element associated with the voicemail message.

55. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is derived from processing an optical scan element associated with the voicemail message.

56. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is derived from processing an iris print element associated with the voicemail message.

57. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is derived from processing a DNA scan element associated with the voicemail message.

58. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is derived using face recognition technology to process a photographic facial image element associated with the voicemail message.

59. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is derived from analysis of a keyboard typing pattern element associated with the voicemail message.

60. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is derived from an analysis of a numeric keypad typing pattern element associated with the voicemail message.

61. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is derived from an analysis of a hand geometry element associated with the voicemail message.

62. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is derived from analysis of a fingerprint element associated with the voicemail message.

63. The method of claim 1, wherein the information message is a voicemail message and the personalized identifier is derived from analysis of a thumbprint element associated with the voicemail message.

64. The method of claim 1, wherein the information message is a voicemail message and wherein the prioritization includes an element of providing a personalized greeting to the sender based on the personalized identifier and the priority code.

65. The method of claim 1, wherein the information message is a voicemail message and wherein the prioritization includes an element of providing a personalized response to the sender based on the personalized identifier and the priority code.

66. The method of claim 1, wherein the elements of the method are performed by an automated system selected from the group consisting of: a computer, a voice-type message storage device, a facsimile machine, a combination of any two of the foregoing, and a combination of the first three of the foregoing.

67. The method of claim 1, wherein the personalized identifier is a biometric signature technology that is associated with the sender and the message.

68. A system for prioritizing a received information message, the system including a database maintaining known personalized identifiers and priority codes corresponding to known personalized identifiers, said system comprising:
a computing device for determining a first personalized identifier associated with a received information message;
a location device for matching the first personalized identifier with any other;

a priority assignment device for assigning a priority code to the received information message corresponding to any matched first personalized identifier; and
a prioritizer to prioritize the message according to the priority code.

69. The system of claim 68, further comprising:
a mailbox corresponding to the priority code; and
a system for depositing the message in the mailbox.

70. A computer-readable medium of instructions and data, comprising:
a received message;
a personalized identifier corresponding to the received message;
computer instructions for receiving the message and the personalized identifier;
a database containing known personalized identifiers, each having corresponding priority codes;
computer instructions for locating the personalized identifier to the database to determine whether the personalized identifier is a known personalized identifier with an assigned priority code indicated in the database;
a priority code corresponding to the message;
computer instructions for assigning the priority code to the message; and
computer instructions for prioritizing or otherwise acting upon the message according to the priority code.

71. The computer-readable medium of instructions of claim 70, further comprising:
a mailbox corresponding to the priority code; and
computer instructions for depositing the message in the mailbox.

AMENDED CLAIMS

[received by the International Bureau on 3 July 2001 (03.07.01);
original claims 1-71 replaced by amended claims 1-74 (11 pages)]

1. A method for an electronic communications message system to prioritize an information message comprising:

determining a personalized identifier corresponding to the message;

locating the personalized identifier in a database;

assigning from the database a priority code corresponding to the personalized identifier; and

prioritizing the message according to the priority code.

2. The method of claim 1, wherein the priority code is maintained in the database and corresponds to the personalized identifier in the database, and further comprising depositing the message in a virtual mailbox corresponding to the priority code.

3. The method of claim 2, wherein the database, the personalized identifiers, the priority codes, and the correlation between the personalized identifiers and the priority codes are initially defined by a user and subsequently changeable by said user.

4. The method of claim 1 wherein the prioritization includes an element of providing a personalized response to the sender.

5. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is a sender e-mail address corresponding to the e-mail message.

6. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is a PIN associated with the e-mail message.

7. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is a PAC associated with the e-mail message.

8. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is a third-party verification of identity for the sender of the e-mail message.

9. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is an inherent characteristic of the e-mail message.

10. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is a machine number for a sender server of the e-mail message.

11. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is path origin information associated with the e-mail message.

12. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is message data associated with the e-mail message.

13. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is billing data associated with the e-mail message.

14. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is a file attached to the e-mail message.

15. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is derived from a biometric signature technology associated with the e-mail message.

16. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is derived from the voiceprint of an audio element associated with the e-mail message.

17. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is derived from a signature analysis of a graphics element associated with the e-mail message.

18. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is derived from processing an optical scan element associated with the e-mail message.

19. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is derived from processing an iris print element associated with the e-mail message.

20. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is derived from processing a DNA scan element associated with the e-mail message.

21. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is derived using face recognition technology to process a photographic facial image element associated with the e-mail message.

22. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is derived from analysis of a keyboard typing pattern element associated with the e-mail message.

23. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is derived from an analysis of a numeric keypad typing pattern element associated with the e-mail message.

24. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is derived from an analysis of a hand geometry element associated with the e-mail message.

25. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is derived from analysis of a fingerprint element associated with the e-mail message.

26. The method of claim 72, wherein the information message is an e-mail message and the personalized identifier is derived from analysis of a thumbprint element associated with the e-mail message.

27. The method of claim 72, wherein the information message is an e-mail message and wherein the prioritization includes an element of providing a personalized response to the sender based on the personalized identifier and the priority code.

28. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is a Caller-ID number corresponding to the facsimile message.

29. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is a PIN associated with the facsimile message.

30. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is a PAC associated with the facsimile message.

31. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is a third party verification of identity of the sender of the facsimile message.

32. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is an inherent characteristic of the facsimile message.

33. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is a sending station identification corresponding to the facsimile message.

34. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is a biometric signature technology associated with the facsimile message.

35. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is derived from the voiceprint of an audio element associated with the facsimile message.

36. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is derived from a signature analysis of a graphics element associated with the facsimile message.

37. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is derived from processing an optical scan element associated with the facsimile message.

38. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is derived from processing an iris print element associated with the facsimile message.

39. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is derived from processing a DNA scan element associated with the facsimile message.

40. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is derived using face recognition technology to process a photographic facial image element associated with the facsimile message.

41. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is derived from an analysis of a hand geometry element associated with the facsimile message.

42. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is derived from analysis of a fingerprint element associated with the facsimile message.

43. The method of claim 73, wherein the information message is a facsimile message and the personalized identifier is derived from analysis of a thumbprint element associated with the facsimile message.

44. The method of claim 73, wherein the information message is a facsimile message and wherein the prioritization includes an element of providing a personalized greeting to the sender based on the personalized identifier and the priority code.

45. The method of claim 73, wherein the information message is a facsimile message and wherein the prioritization includes an element of providing a personalized response to the sender based on the personalized identifier and the priority code.

46. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is a Caller-ID number corresponding to the voicemail message.

47. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is a PIN associated with the voicemail message and keyed-in by the sender.

48. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is a PAC associated with the voicemail message and keyed-in by the sender.

49. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is a PIN associated with the voicemail message and spoken by the sender.

50. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is a PAC associated with the voicemail message and spoken by the sender.

51. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is a voice command corresponding to the voicemail message.

52. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is derived from a biometric signature technology associated with the voicemail message.

53. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is derived from the voiceprint of an audio element associated with the voicemail message.

54. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is derived from a signature analysis of a graphics element associated with the voicemail message.

55. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is derived from processing an optical scan element associated with the voicemail message.

56. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is derived from processing an iris print element associated with the voicemail message.

57. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is derived from processing a DNA scan element associated with the voicemail message.

58. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is derived using face recognition technology to process a photographic facial image element associated with the voicemail message.

59. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is derived from analysis of a keyboard typing pattern element associated with the voicemail message.

60. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is derived from an analysis of a numeric keypad typing pattern element associated with the voicemail message.

61. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is derived from an analysis of a hand geometry element associated with the voicemail message.

62. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is derived from analysis of a fingerprint element associated with the voicemail message.

63. The method of claim 74, wherein the information message is a voicemail message and the personalized identifier is derived from analysis of a thumbprint element associated with the voicemail message.

64. The method of claim 74, wherein the information message is a voicemail message and wherein the prioritization includes an element of providing a personalized greeting to the sender based on the personalized identifier and the priority code.

65. The method of claim 74, wherein the information message is a voicemail message and wherein the prioritization includes an element of providing a personalized response to the sender based on the personalized identifier and the priority code.

66. The method of claim 1, wherein the elements of the method are performed by an automated system selected from the group consisting of: a computer, a voice-type message storage device, a facsimile machine, a combination of any two of the foregoing, and a combination of the first three of the foregoing.

67. The method of claim 1, wherein the personalized identifier is a biometric signature technology that is associated with the sender and the message.

68. A system for prioritizing a received information message, the system including a database maintaining known personalized identifiers and priority codes corresponding to known personalized identifiers, said system comprising:
a computing device for determining a first personalized identifier associated with a received information message;
a location device for matching the first personalized identifier with any other;
a priority assignment device for assigning a priority code to the received information message corresponding to any matched first personalized identifier; and
a prioritizer to prioritize the message according to the priority code.

69. The system of claim 68, further comprising:

a mailbox corresponding to the priority code; and

a system for depositing the message in the mailbox.

70. A computer-readable medium of instructions and data, comprising:

a received message;

a personalized identifier corresponding to the received message;

computer instructions for receiving the message and the personalized identifier;

a database containing known personalized identifiers, each having corresponding priority codes;

computer instructions for locating the personalized identifier to the database to determine whether the personalized identifier is a known personalized identifier with an assigned priority code indicated in the database;

a priority code corresponding to the message;

computer instructions for assigning the priority code to the message; and

computer instructions for prioritizing or otherwise acting upon the message according to the priority code.

71. The computer-readable medium of instructions of claim 70, further comprising:

a mailbox corresponding to the priority code; and

computer instructions for depositing the message in the mailbox.

72. The method of claim 1, wherein the information message is an e-mail message.

73. The method of claim 1, wherein the information message is a facsimile message.

74. The method of claim 1, wherein the information message is a voicemail message.

Statement Under PCT Article 19(1) and PCT Rule 46.4

In accordance with PCT Rule 46.5, please substitute enclosed replacement pages 22 containing new previously pending claims 16 (partial) - 20 and new claim 21 for original sheet 22. Claim 21 is supported at Page 9, lines 10-13 and 20-28 of the Specification and in each of the Figures. No new matter is being added.

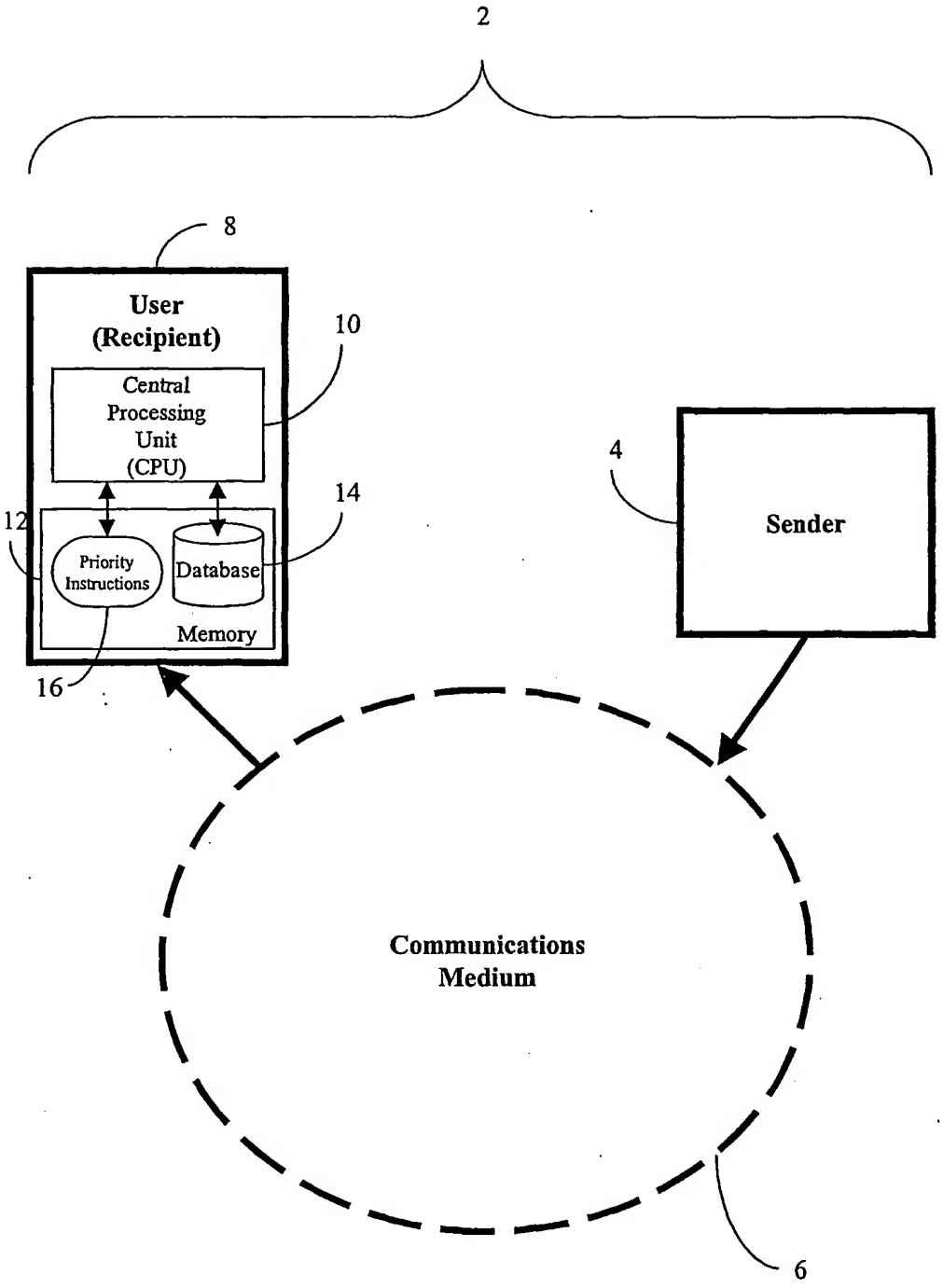

2
8
User
(Recipient)
10
Central
Processing
Unit
(CPU)
14
12
Priority
Instructions
Database
Memory
16
4
Sender
Communications
Medium
6

Fig. 1

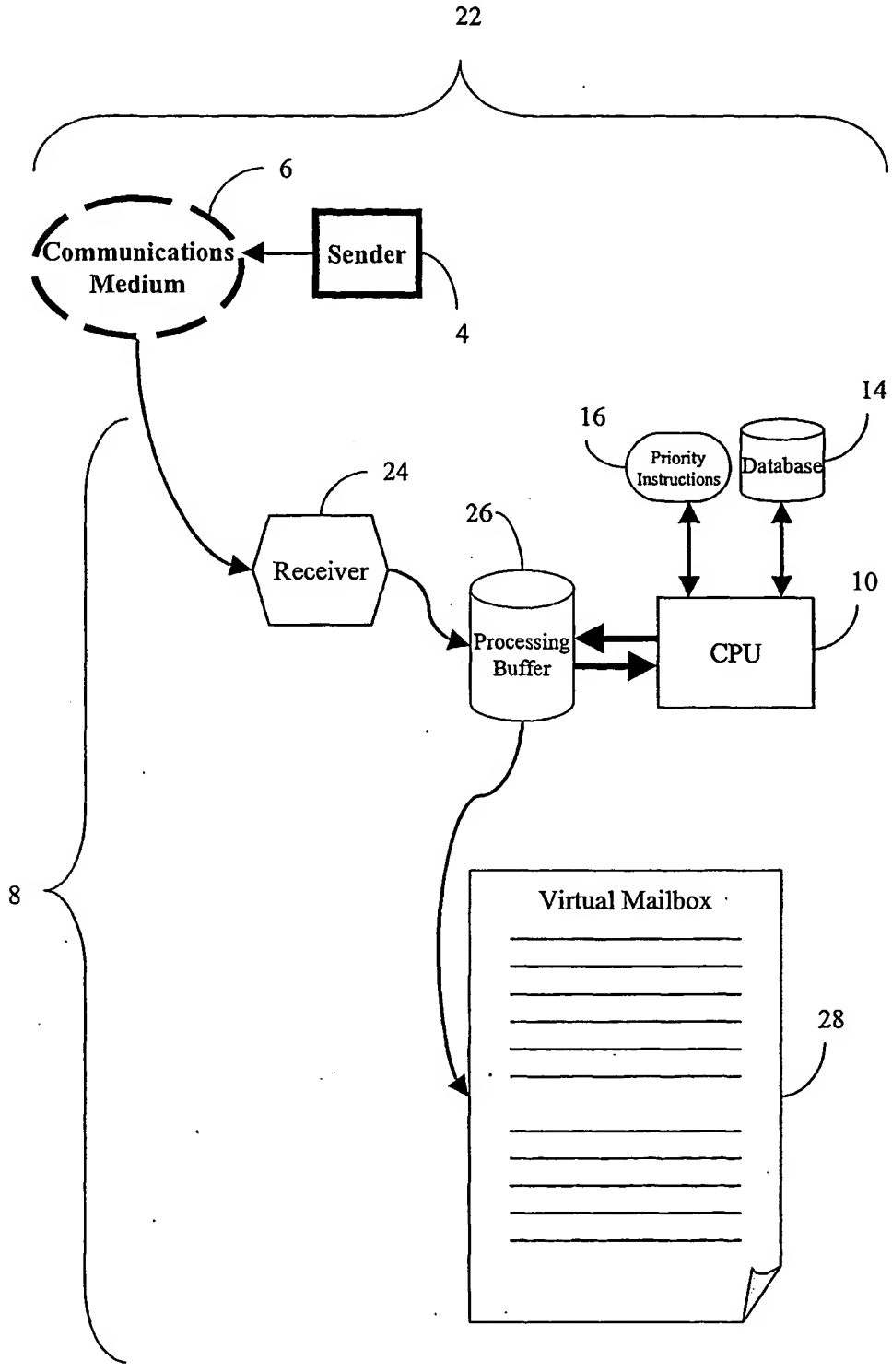

22
6
Communications Medium
Sender
4
14
16
Priority Instructions
Database
24
26
Receiver
Processing Buffer
CPU
10
8
Virtual Mailbox
28

Fig. 2A

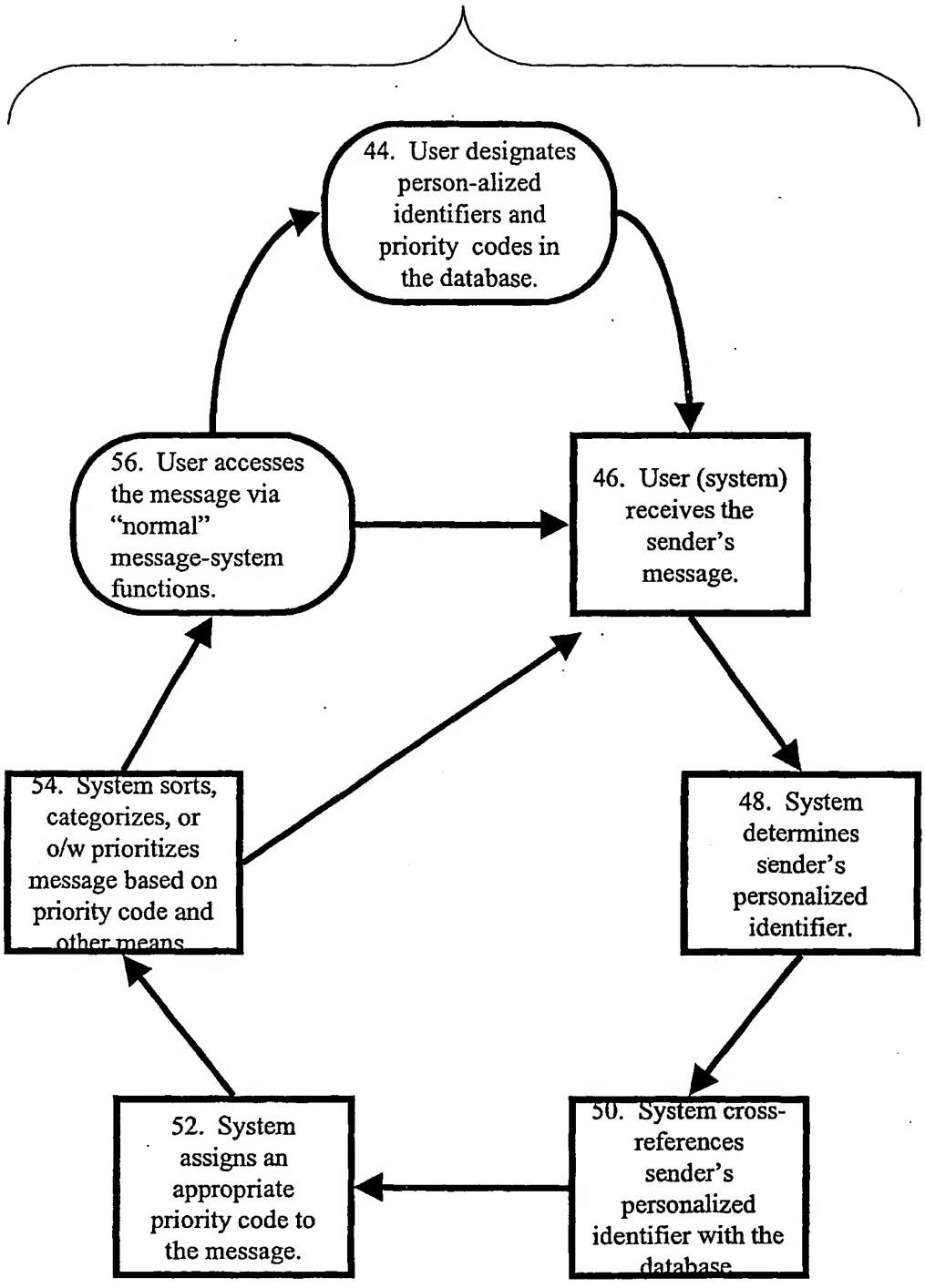
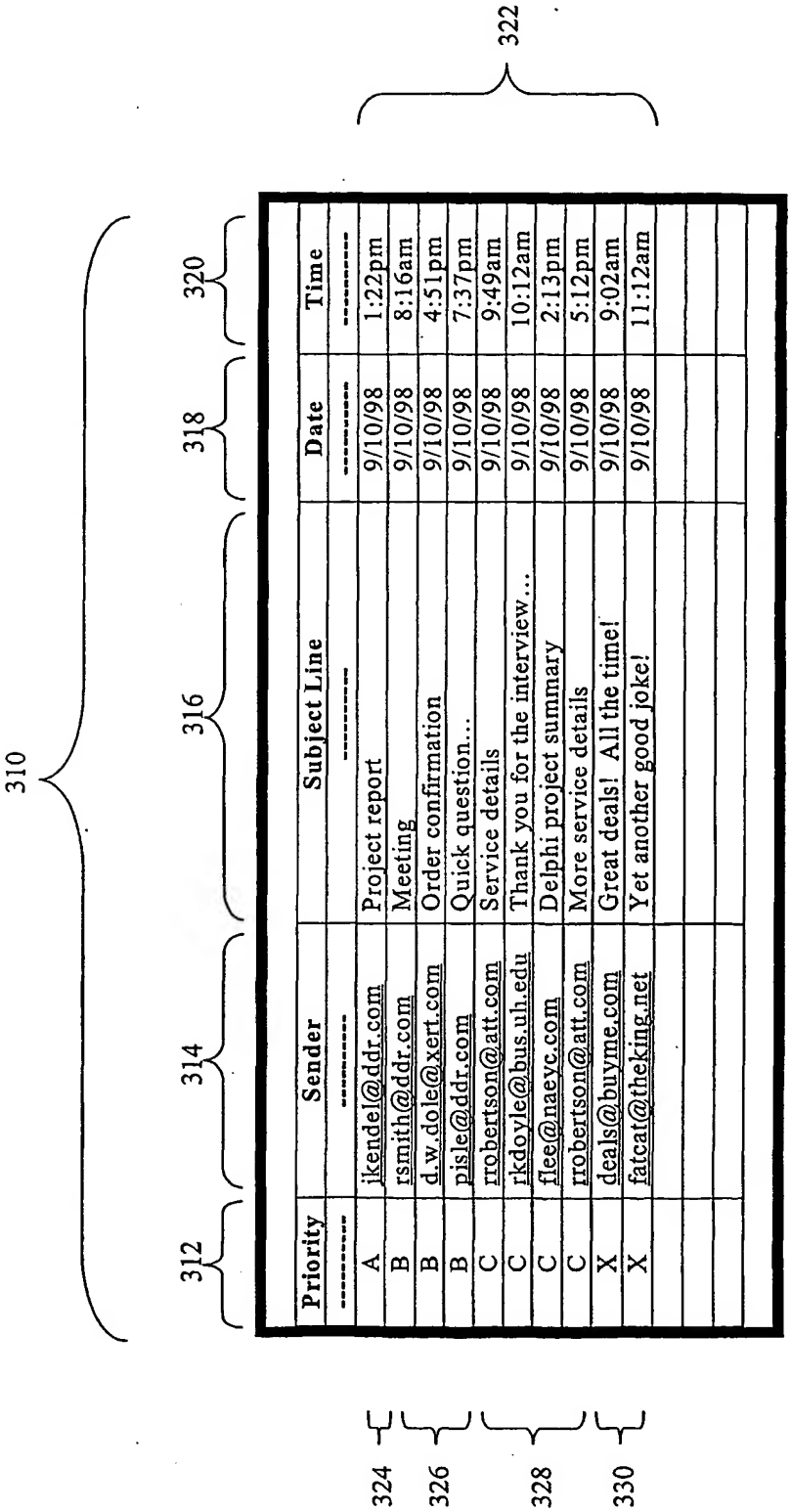

42
44. User designates person-alized identifiers and priority codes in the database.
46. User (system) receives the sender's message.
48. System determines sender's personalized identifier.
50. System cross-references sender's personalized identifier with the database
52. System assigns an appropriate priority code to the message.
54. System sorts, categorizes, or o/w prioritizes message based on priority code and other means
56. User accesses the message via "normal" message-system functions.

Fig. 2B



Priority	Sender	Subject Line	Date	Time
---------	---------	---------	---------	---------
A	jkendel@ddr.com	Project report	9/10/98	1:22pm
B	rsmith@ddr.com	Meeting	9/10/98	8:16am
B	d.w.dole@xert.com	Order confirmation	9/10/98	4:51pm
B	pisle@ddr.com	Quick question...	9/10/98	7:37pm
C	rrobertson@att.com	Service details	9/10/98	9:49am
C	rkdoyle@bus.uh.edu	Thank you for the interview...	9/10/98	10:12am
C	flee@naevc.com	Delphi project summary	9/10/98	2:13pm
C	rrobertson@att.com	More service details	9/10/98	5:12pm
X	deals@buyme.com	Great deals! All the time!	9/10/98	9:02am
X	fatcat@theking.net	Yet another good joke!	9/10/98	11:12am

Fig. 3A

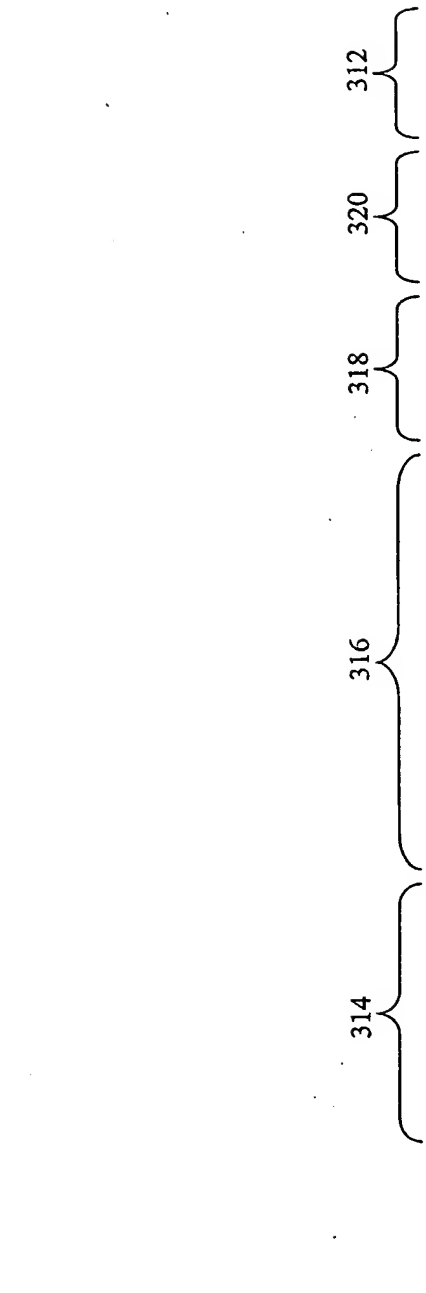
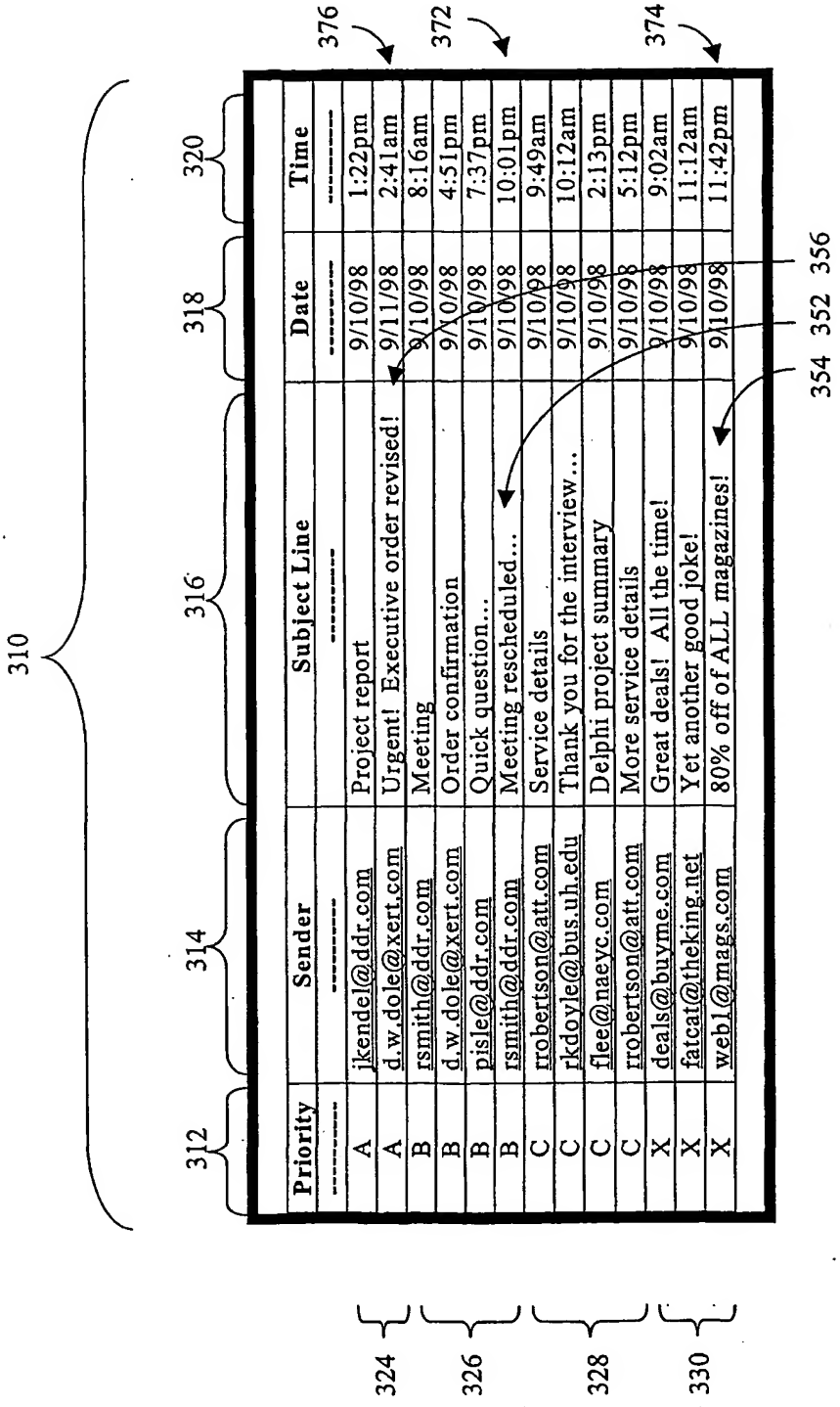

352
354
356
314
316
318
320
312
SENDER
SUBJECT LINE
DATE
TIME
PRIORITY
rsmith@ddr.com
Meeting rescheduled…
9/10/98
10:01pm
B
web1@mags.com
80% off of ALL magazines!
9/10/98
11:42pm
X
d.w.dole@xert.com
Urgent! Executive order revised!
9/11/98
2:41am
A

Fig. 3B



Priority	Sender	Subject Line	Date	Time
---------	---------	---------	---------	---------
A	jkendel@ddr.com	Project report	9/10/98	1:22pm
A	d.w.dole@xert.com	Urgent! Executive order revised!	9/11/98	2:41am
B	rsmith@ddr.com	Meeting	9/10/98	8:16am
B	d.w.dole@xert.com	Order confirmation	9/10/98	4:51pm
B	pisle@ddr.com	Quick question...	9/10/98	7:37pm
B	rsmith@ddr.com	Meeting rescheduled...	9/10/98	10:01pm
C	rrobertson@att.com	Service details	9/10/98	9:49am
C	rkdoyle@bus.uh.edu	Thank you for the interview...	9/10/98	10:12am
C	flee@naeyc.com	Delphi project summary	9/10/98	2:13pm
C	rrobertson@att.com	More service details	9/10/98	5:12pm
X	deals@buyme.com	Great deals! All the time!	9/10/98	9:02am
X	fatcat@theking.net	Yet another good joke!	9/10/98	11:12am
X	web1@mags.com	80% off of ALL magazines!	9/10/98	11:42pm

Fig. 3C

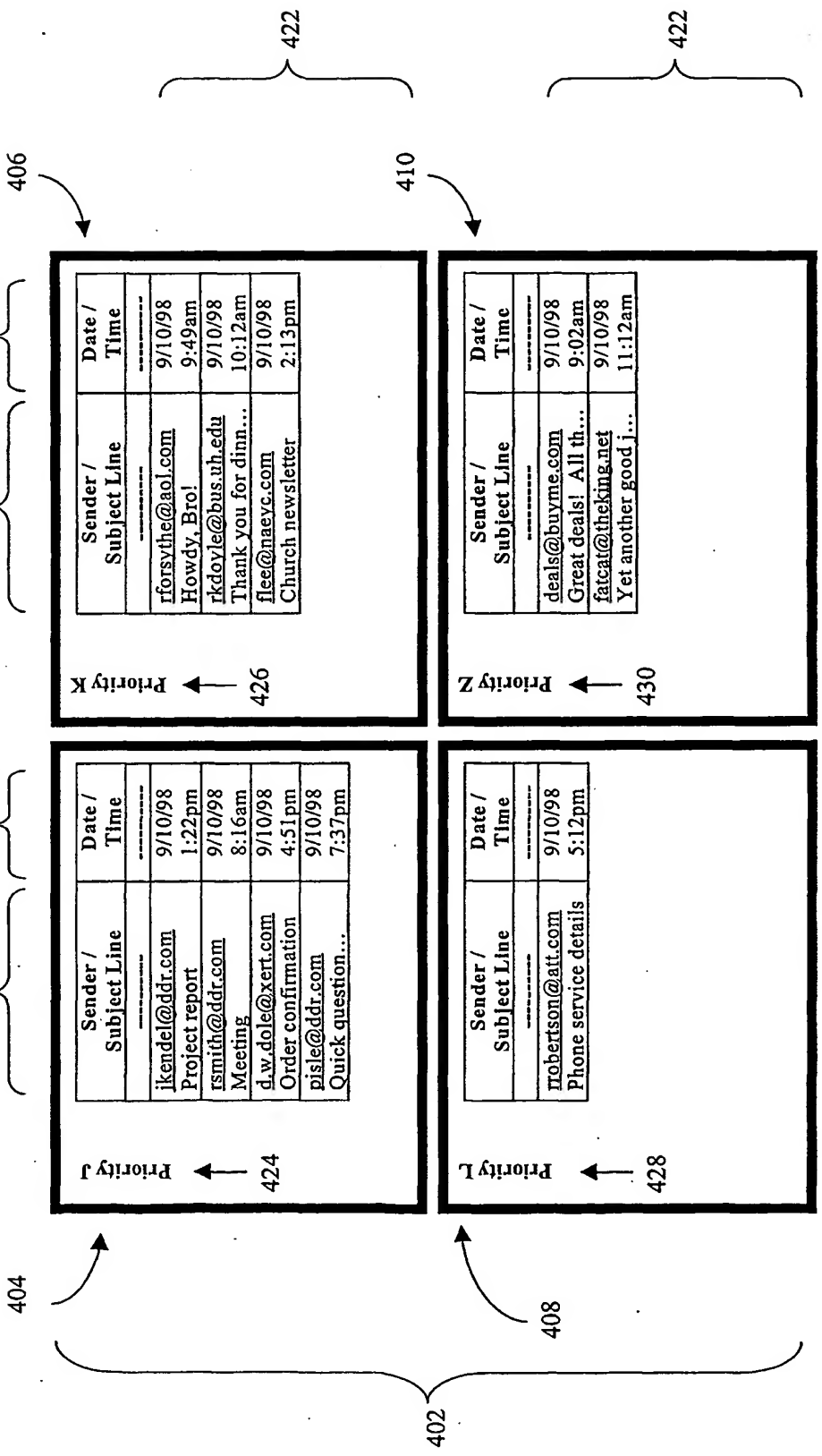

402
404
406
408
410
414 / 416
418 / 420
422
424
426
428
430
Priority J
Priority K
Priority L
Priority Z
Sender / Subject Line
Date / Time
jkendel@ddr.com Project report
9/10/98 1:22pm
rsmith@ddr.com Meeting
9/10/98 8:16am
d.w.dole@xert.com Order confirmation
9/10/98 4:51pm
pisle@ddr.com Quick question...
9/10/98 7:37pm
rforsythe@aol.com Howdy, Bro!
9/10/98 9:49am
rkdoyle@bus.uh.edu Thank you for dinn...
9/10/98 10:12am
flee@naeyc.com Church newsletter
9/10/98 2:13pm
rrobertson@att.com Phone service details
9/10/98 5:12pm
deals@buyme.com Great deals! All th...
9/10/98 9:02am
fatcat@theking.net Yet another good j...
9/10/98 11:12am

Fig. 4A

	414	416	418	420
	SENDER	SUBJECT LINE	DATE	TIME	PRIORITY
452	rsmith@hotmail.com	See you in September?	9/10/98	10:01pm	K
454	web1@mags.com	80% off of ALL magazines!	9/10/98	11:42pm	Z
456	d.w.dole@xert.com	Urgent! Executive order revised!	9/11/98	2:41am	J

Fig. 4B

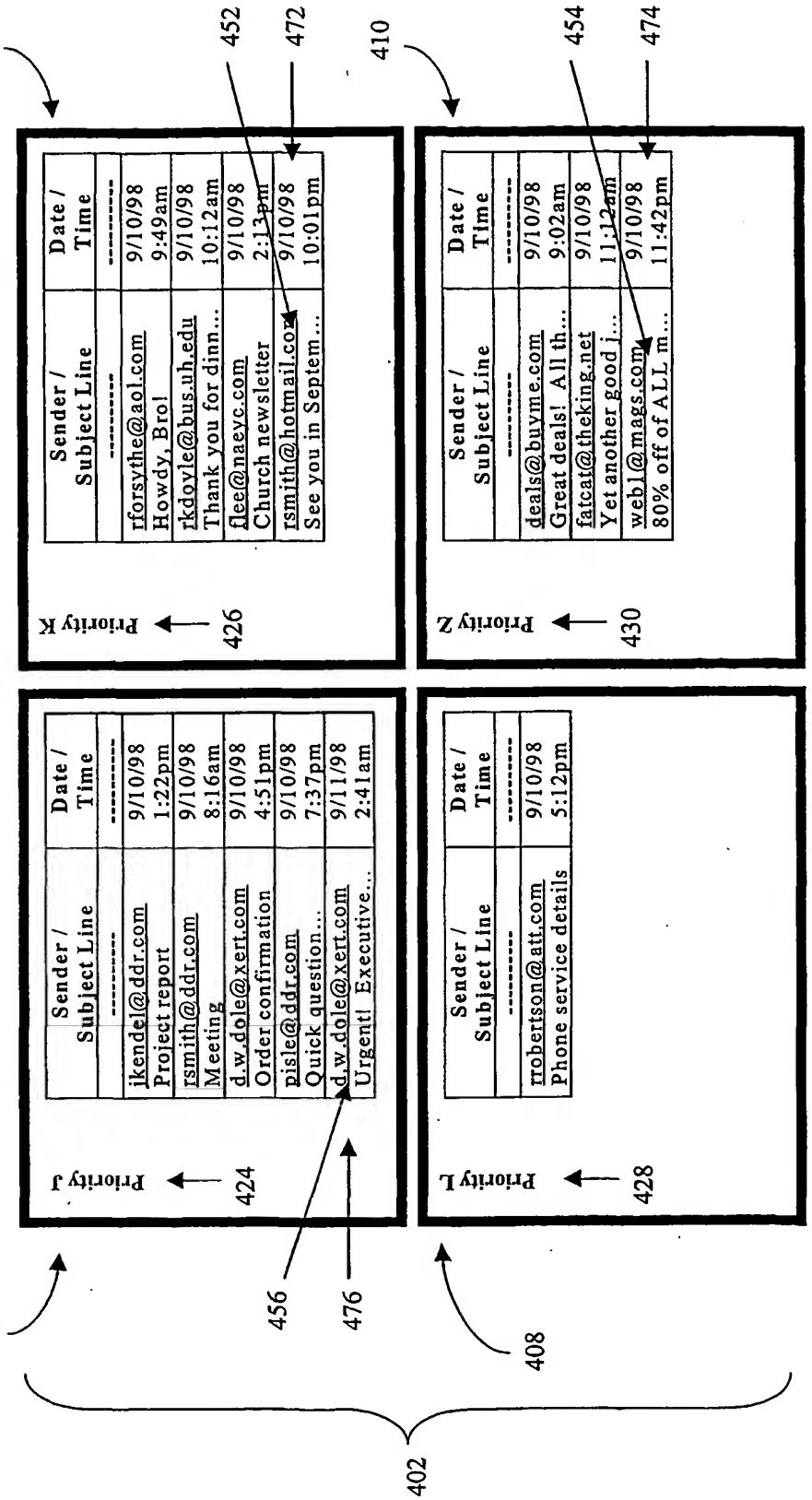

406
452
472
410
454
474
414 / 416
418 / 420
Sender / Subject Line
Date / Time
rforsythe@aol.com Howdy, Bro!
9/10/98 9:49am
rkdoyle@bus.uh.edu Thank you for dinn...
9/10/98 10:12am
flee@naevc.com Church newsletter
9/10/98 2:13pm
rsmith@hotmail.com See you in Septem...
9/10/98 10:01pm
Priority K
426
deals@buyme.com Great deals! All th...
9/10/98 9:02am
fatcat@theking.net Yet another good j...
9/10/98 11:12am
web1@mags.com 80% off of ALL m...
9/10/98 11:42pm
Priority Z
430
jkendel@ddr.com Project report
9/10/98 1:22pm
rsmith@ddr.com Meeting
9/10/98 8:16am
d.w.dole@xert.com Order confirmation
9/10/98 4:51pm
pisle@ddr.com Quick question...
9/10/98 7:37pm
d.w.dole@xert.com Urgent! Executive...
9/11/98 2:41am
Priority J
424
rrobertson@att.com Phone service details
9/10/98 5:12pm
Priority L
428
404
456
476
408
402

Fig. 4C

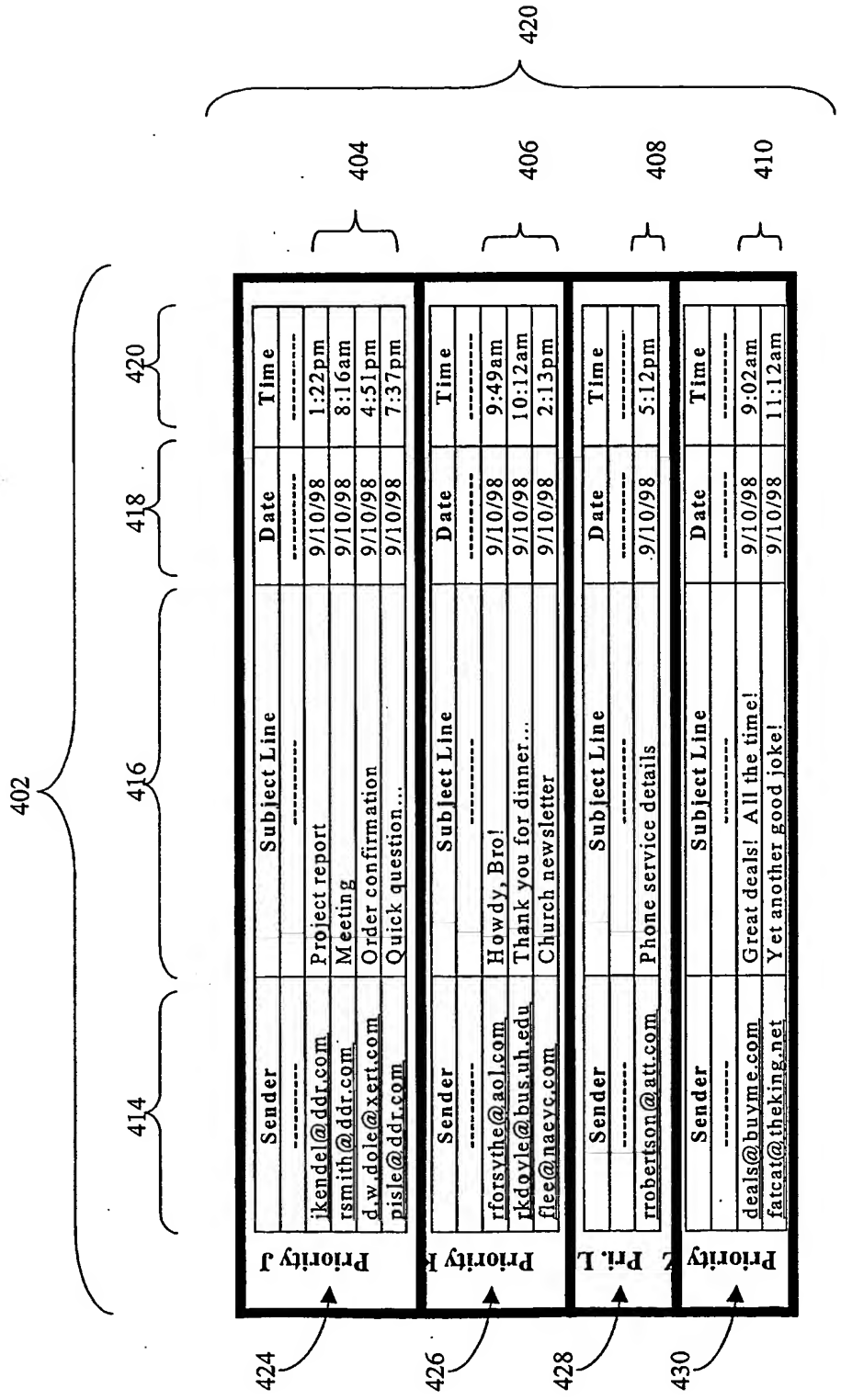

402
414
416
418
420
404
406
408
410
Priority J
Priority K
Pri. L
Priority
Sender
Subject Line
Date
Time
jkendel@ddr.com
Project report
9/10/98
1:22pm
rsmith@ddr.com
Meeting
9/10/98
8:16am
d.w.dole@xert.com
Order confirmation
9/10/98
4:51pm
pisle@ddr.com
Quick question...
9/10/98
7:37pm
rforsythe@aol.com
Howdy, Bro!
9/10/98
9:49am
rkdoyle@bus.uh.edu
Thank you for dinner...
9/10/98
10:12am
flee@naevc.com
Church newsletter
9/10/98
2:13pm
rrobertson@att.com
Phone service details
9/10/98
5:12pm
deals@buyme.com
Great deals! All the time!
9/10/98
9:02am
fatcat@theking.net
Yet another good joke!
9/10/98
11:12am
424
426
428
430

Fig. 4X

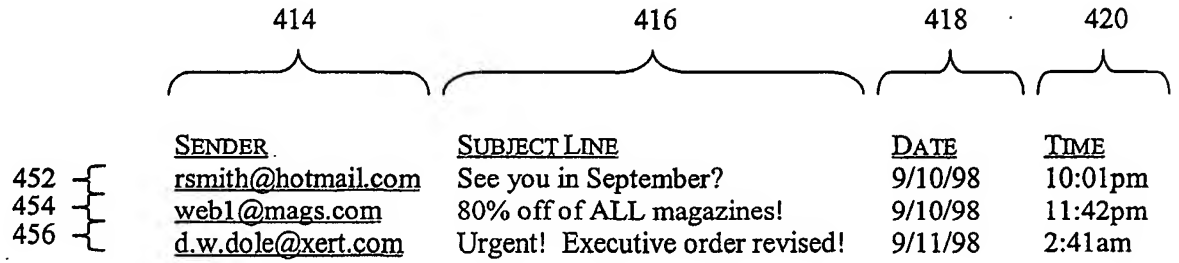
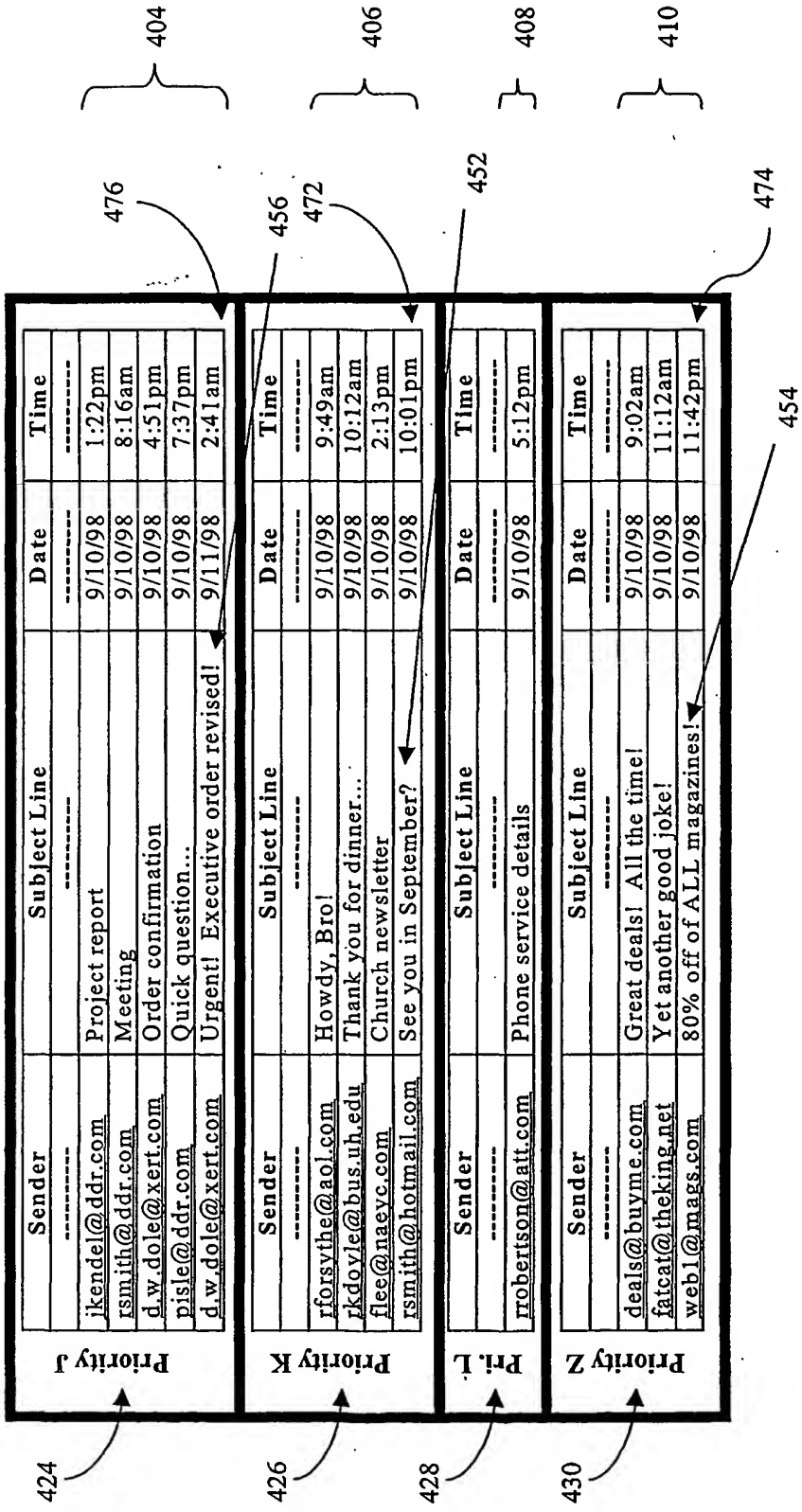

414
416
418
420
SENDER
SUBJECT LINE
DATE
TIME
PRIORITY
452
rsmith@hotmail.com
See you in September?
9/10/98
10:01pm
K
454
web1@mags.com
80% off of ALL magazines!
9/10/98
11:42pm
Z
456
d.w.dole@xert.com
Urgent! Executive order revised!
9/11/98
2:41am
J

Fig. 4Y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414
416
418
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476
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472
452
474
454
Priority J
Priority K
Pri. L
Priority Z
424
426
428
430
Sender
Subject Line
Date
Time
jkendel@ddr.com
Project report
9/10/98
1:22pm
rsmith@ddr.com
Meeting
9/10/98
8:16am
d.w.dole@xert.com
Order confirmation
9/10/98
4:51pm
pisle@ddr.com
Quick question....
9/10/98
7:37pm
d.w.dole@xert.com
Urgent! Executive order revised!
9/11/98
2:41am
rforsythe@aol.com
Howdy, Bro!
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9/10/98
10:01pm
rrobertson@att.com
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deals@buyme.com
Great deals! All the time!
9/10/98
9:02am
fatcat@theking.net
Yet another good joke!
9/10/98
11:12am
web1@mags.com
80% off of ALL magazines!
9/10/98
11:42pm

Fig. 4Z

Single Character Priority Alpha-Numeric Code (PAC)
Set of personalized Identifiers

0	6	C	I	O	U
1	7	D	J	P	V
2	8	E	K	Q	W
3	9	F	L	R	X
4	A	G	M	S	Y
5	B	H	N	T	Z

Fig. 5A

Two-Character Priority Alpha-Numeric Code (PAC)
Set of personalized Identifiers

00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0	G0	H0	I0	J0	K0	L0	M0	N0	O0	P0	Q0	R0	S0	T0	U0	V0	W0	X0	Y0	Z0
01	11	21	31	41	51	61	71	81	91	A1	B1	C1	D1	E1	F1	G1	H1	I1	J1	K1	L1	M1	N1	O1	P1	Q1	R1	S1	T1	U1	V1	W1	X1	Y1	Z1
02	12	22	32	42	52	62	72	82	92	A2	B2	C2	D2	E2	F2	G2	H2	I2	J2	K2	L2	M2	N2	O2	P2	Q2	R2	S2	T2	U2	V2	W2	X2	Y2	Z2
03	13	23	33	43	53	63	73	83	93	A3	B3	C3	D3	E3	F3	G3	H3	I3	J3	K3	L3	M3	N3	O3	P3	Q3	R3	S3	T3	U3	V3	W3	X3	Y3	Z3
04	14	24	34	44	54	64	74	84	94	A4	B4	C4	D4	E4	F4	G4	H4	I4	J4	K4	L4	M4	N4	O4	P4	Q4	R4	S4	T4	U4	V4	W4	X4	Y4	Z4
05	15	25	35	45	55	65	75	85	95	A5	B5	C5	D5	E5	F5	G5	H5	I5	J5	K5	L5	M5	N5	O5	P5	Q5	R5	S5	T5	U5	V5	W5	X5	Y5	Z5
06	16	26	36	46	56	66	76	86	96	A6	B6	C6	D6	E6	F6	G6	H6	I6	J6	K6	L6	M6	N6	O6	P6	Q6	R6	S6	T6	U6	V6	W6	X6	Y6	Z6
07	17	27	37	47	57	67	77	87	97	A7	B7	C7	D7	E7	F7	G7	H7	I7	J7	K7	L7	M7	N7	O7	P7	Q7	R7	S7	T7	U7	V7	W7	X7	Y7	Z7
08	18	28	38	48	58	68	78	88	98	A8	B8	C8	D8	E8	F8	G8	H8	I8	J8	K8	L8	M8	N8	O8	P8	Q8	R8	S8	T8	U8	V8	W8	X8	Y8	Z8
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0A	1A	2A	3A	4A	5A	6A	7A	8A	9A	AA	BA	CA	DA	EA	FA	GA	HA	IA	JA	KA	LA	MA	NA	OA	PA	QA	RA	SA	TA	UA	VA	WA	XA	YA	ZA
0B	1B	2B	3B	4B	5B	6B	7B	8B	9B	AB	BB	CB	DB	EB	FB	GB	HB	IB	JB	KB	LB	MB	NB	OB	PB	QB	RB	SB	TB	UB	VB	WB	XB	YB	ZB
0C	1C	2C	3C	4C	5C	6C	7C	8C	9C	AC	BC	CC	DC	EC	FC	GC	HC	IC	JC	KC	LC	MC	NC	OC	PC	QC	RC	SC	TC	UC	VC	WC	XC	YC	ZC
0D	1D	2D	3D	4D	5D	6D	7D	8D	9D	AD	BD	CD	DD	ED	FD	GD	HD	ID	JD	KD	LD	MD	ND	OD	PD	QD	RD	SD	TD	UD	VD	WD	XD	YD	ZD
0E	1E	2E	3E	4E	5E	6E	7E	8E	9E	AE	BE	CE	DE	EE	FE	GE	HE	IE	JE	KE	LE	ME	NE	OE	PE	QE	RE	SE	TE	UE	VE	WE	XE	YE	ZE
0F	1F	2F	3F	4F	5F	6F	7F	8F	9F	AF	BF	CF	DF	EF	FF	GF	HF	IF	JF	KF	LF	MF	NF	OF	PF	QF	RF	SF	TF	UF	VF	WF	XF	YF	ZF
0G	1G	2G	3G	4G	5G	6G	7G	8G	9G	AG	BG	CG	DG	EG	FG	GG	HG	IG	JG	KG	LG	MG	NG	OG	PG	QG	RG	SG	TG	UG	VG	WG	XG	YG	ZG
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0I	1I	2I	3I	4I	5I	6I	7I	8I	9I	AI	BI	CI	DI	EI	FI	GI	HI	II	JI	KI	LI	MI	NI	OI	PI	QI	RI	SI	TI	UI	VI	WI	XI	YI	ZI
0J	1J	2J	3J	4J	5J	6J	7J	8J	9J	AJ	BJ	CJ	DJ	EJ	FJ	GJ	HJ	IJ	JJ	KJ	LJ	MJ	NJ	OJ	PJ	QJ	RJ	SJ	TJ	UJ	VJ	WJ	XJ	YJ	ZJ
0K	1K	2K	3K	4K	5K	6K	7K	8K	9K	AK	BK	CK	DK	EK	FK	GK	HK	IK	JK	KK	LK	MK	NK	OK	PK	QK	RK	SK	TK	UK	VK	WK	XK	YK	ZK
0L	1L	2L	3L	4L	5L	6L	7L	8L	9L	AL	BL	CL	DL	EL	FL	GL	HL	IL	JL	KL	LL	ML	NL	OL	PL	QL	RL	SL	TL	UL	VL	WL	XL	YL	ZL
0M	1M	2M	3M	4M	5M	6M	7M	8M	9M	AM	BM	CM	DM	EM	FM	GM	HM	IM	JM	KM	LM	MM	NM	OM	PM	QM	RM	SM	TM	UM	VM	WM	XM	YM	ZM
0N	1N	2N	3N	4N	5N	6N	7N	8N	9N	AN	BN	CN	DN	EN	FN	GN	HN	IN	JN	KN	LN	MN	NN	ON	PN	QN	RN	SN	TN	UN	VN	WN	XN	YN	ZN
0O	1O	2O	3O	4O	5O	6O	7O	8O	9O	AO	BO	CO	DO	EO	FO	GO	HO	IO	JO	KO	LO	MO	NO	OO	PO	QO	RO	SO	TO	UO	VO	WO	XO	YO	ZO
0P	1P	2P	3P	4P	5P	6P	7P	8P	9P	AP	BP	CP	DP	EP	FP	GP	HP	IP	JP	KP	LP	MP	NP	OP	PP	QP	RP	SP	TP	UP	VP	WP	XP	YP	ZP
0Q	1Q	2Q	3Q	4Q	5Q	6Q	7Q	8Q	9Q	AQ	BQ	CQ	DQ	EQ	FQ	GQ	HQ	IQ	JQ	KQ	LQ	MQ	NQ	OQ	PQ	QQ	RQ	SQ	TQ	UQ	VQ	WQ	XQ	YQ	ZQ
0R	1R	2R	3R	4R	5R	6R	7R	8R	9R	AR	BR	CR	DR	ER	FR	GR	HR	IR	JR	KR	LR	MR	NR	OR	PR	QR	RR	SR	TR	UR	VR	WR	XR	YR	ZR
0S	1S	2S	3S	4S	5S	6S	7S	8S	9S	AS	BS	CS	DS	ES	FS	GS	HS	IS	JS	KS	LS	MS	NS	OS	PS	QS	RS	SS	TS	US	VS	WS	XS	YS	ZS
0T	1T	2T	3T	4T	5T	6T	7T	8T	9T	AT	BT	CT	DT	ET	FT	GT	HT	IT	JT	KT	LT	MT	NT	OT	PT	QT	RT	ST	TT	UT	VT	WT	XT	YT	ZT
0U	1U	2U	3U	4U	5U	6U	7U	8U	9U	AU	BU	CU	DU	EU	FU	GU	HU	IU	JU	KU	LU	MU	NU	OU	PU	QU	RU	SU	TU	UU	VU	WU	XU	YU	ZU
0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	AV	BV	CV	DV	EV	FV	GV	HV	IV	JV	KV	LV	MV	NV	OV	PV	QV	RV	SV	TV	UV	VV	WV	XV	YV	ZV
0W	1W	2W	3W	4W	5W	6W	7W	8W	9W	AW	BW	CW	DW	EW	FW	GW	HW	IW	JW	KW	LW	MW	NW	OW	PW	QW	RW	SW	TW	UW	VW	WW	XW	YW	ZW
0X	1X	2X	3X	4X	5X	6X	7X	8X	9X	AX	BX	CX	DX	EX	FX	GX	HX	IX	JX	KX	LX	MX	NX	OX	PX	QX	RX	SX	TX	UX	VX	WX	XX	YX	ZX
0Y	1Y	2Y	3Y	4Y	5Y	6Y	7Y	8Y	9Y	AY	BY	CY	DY	EY	FY	GY	HY	IY	JY	KY	LY	MY	NY	OY	PY	QY	RY	SY	TY	UY	VY	WY	XY	YY	ZY
0Z	1Z	2Z	3Z	4Z	5Z	6Z	7Z	8Z	9Z	AZ	BZ	CZ	DZ	EZ	FZ	GZ	HZ	IZ	JZ	KZ	LZ	MZ	NZ	OZ	PZ	QZ	RZ	SZ	TZ	UZ	VZ	WZ	XZ	YZ	ZZ

Fig. 5B

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/12192

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04M 1/64
US CL : 379/88.22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : Please See Continuation Sheet

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 5,377,354 A (SCANNELL et al) 27 December 1994 (24.12.1994), column 2, line 49-column 3, line 11, column 6, lines 9-14, column 9, lines 23-30.	1-3,5,7-9,12,66,68-71 --- 4,6,8,10,11,13-65,67
X --- Y	EP 0825752 A2 (ROCHKIND) 25 February 1998 (25.02.1998), table 2, page 5, lines 5-34.	1-3,5,7,9,12,66,68-71 --- 4,6,8,10,11,13,14,27-33,44-51,64,65
X	EP 0588101 A3 (GOLDMAN) 23 March 1994 (23.03.1994), column 2, lines 36-50.	1-4,46,64-66,68-71
Y	US 5,966,351 A (CARLETON et al) 12 October 1999 (12.10.1999), column 1, lines 36-49.	46-48,64,65
Y	US 5,745,591 A (FELDMAN) 28 April 1998 (28.04.1998), column 1, line 12-column 2, line 13.	16-19,21,24-26,35-38,40-43,53-56,58,61-63,67
Y	US 5,751,835 A (TOPPING et al) 12 May 1998 (12.05.1998), column 1, lines 16-22.	16,18-21,25-26,35,37-40,42-43,53,55-58,62-63,67
Y	US 5,229,764 A (MATCHETT et al) 20 July 1993 (20.07.1993), abstract.	15,22-23,34,52,59-60
A	US 5,748,709 A (SHEERIN) 05 May 1998 (05.05.1998), all	46-48,64,65

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
23 May 2001 (23.05.2001)	15 JUN 2001
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230	Authorized officer Ovidio Escalante Telephone No. 703-308-4700

Form PCT/ISA/210 (second sheet) (July 1998)

INTERNATIONAL SEARCH REPORT

Internat application No.
PCT/US01/12192

C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,974,414 A (STANCZAK et al) 26 October 1999 (26.10.1999), all.	1-71
A	US 5,757,891 A (WANG) 26 May 1998 (26.05.1998), all.	1-27,68-71

INTERNATIONAL SEARCH REPORT

Inter il application No.
PCT/US01/12192

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claim Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claim Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claim Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
Please See Continuation Sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest
☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/12192

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In order for more than one species to be examined, the appropriate additional examination fees must be paid. The species are as follows:

Species I, drawn to the information message being an e-mail message.
Species II, drawn to the information message being a facsimile message.
Species III, drawn to the information message being a voice mail message.

The claims are deemed to correspond to the species listed above in the following manner:

Species I - claims 5-27.
Species II - claims 28-45.
Species III - claims 46-65.

The following claim(s) are generic: 1-4,66-67.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons:

Species I has a special technical feature of prioritizing e-mail messages which are not shared by the other species.

Species II has a special technical feature of prioritizing facsimile messages which are not shared by the other species.

Species III has a special technical feature of prioritizing voice mail messages which are not shared by the other species.

Continuation of B. FIELDS SEARCHED Item 1:
379/88.22,93.23,93.24,67.1,70,88.02,88.12,88.27,93.03,100.01,100.08,118;
382/115,116,117,118,119,120,121,122,123,129